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ORIGINAL ARTICLES.

CLINICAL LESSONS.

Post-Hemiplegic Pain; Pre-Hemiplegic Pain; Post-Hemiplegic Joint-Disease; Post-Hemiplegic Nodes.

(*Clinical Lesson from the Infirmary for Diseases of the Nervous System.*)

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THE case I show you to-day is one of considerable interest on account of the early date at which joint-disorder followed an attack of hemiplegia. I shall presently speak to you further of its nature and explanation. It reminds me to ask your attention to pain among the prodromes and sequels of hemiplegia; also as to a somewhat novel matter, the nodes which occasionally appear as sequelæ of this paralysis.

The late Prof. John K. Mitchell first called attention, in 1831, to the production, through spinal injury and sequent disease, of joint-lesions often indistinguishable from the lesions of rheumatism. Allison, in 1838, described joint-lesions following hemiplegia. Drs. Morehouse, Keen, and myself reported numerous examples of joint-trouble caused by peripheral nerve-lesions, and since then I and others have added largely to the literature which deals with nutritive changes occasioned, early or late, by cerebral and spinal disease, and by the diseases or traumas of nerve-trunks.

It is now generally admitted that the joint-disorders which occasionally follow hemiplegia from cerebral lesions owe their origin to a descending degenerative change involving the motor tract and finally the cord. If this be so, we must also admit the fact that these changes are in certain cases very rapid, as I have now seen at least four cases, all of right-sided cerebral lesion, in which joint-lesions, one or more, followed within four days. Then there is, too, a small group of cases not alluded to in the books, in which the sequence is as follows:

1. Unilateral muscular or fibroid pain and soreness.
2. Tenderness of certain joints, slight swelling, and pain only on one side. Repeated attacks strictly limited to one side.
3. Subsequent cerebral clot and paralysis of the painful side.
4. Increase of joint-lesions on the palsied side, and generally chronic unilateral joint trouble. Absence of cardiac disease.

Another type, which, like this, gives us occasion enough to reflect, is this:

1. Long-continued or occasional muscular aches on one side only, without heart-disease or gout.
2. After a year or two hemiplegia of the side thus previously affected.
3. Secondary joint-lesions on the same side, becoming chronic.

In a third class, which is somewhat rare, we have as an *immediate* prodrome of hemiplegia, acute pain in the muscular masses, so as to be mistaken for muscular rheumatism, but confined to the side which within forty-eight hours becomes hemiplegic. The following brief case-sketches may answer for illustrations:

C. S., fifty-two years of age, a housekeeper, in general good health and free from cardiac or renal and gouty troubles, was attacked in 1880, in the early spring, with pain and soreness in the shoulder muscles and in the thigh of the right side. The attack was sharp, but lasted only a week. It was repeated a month later, and again and again, with more or less swelling and tenderness of the shoulder, finger-joints, and knee on the right side only. The last two attacks were accompanied with headache and slight vertigo. The final attack was limited to severe ache in the arm and leg, and after three days of great pain there was sudden loss of power of the whole right side, with loss of sensation. This last was brief; but the motor loss was more grave, and there was never entire recovery of motion in either leg or arm. On the fifth day the shoulder became swollen and tender, and a week later several of the finger-joints suffered in like manner and finally the knee. There was early and, at last, late rigidity of the arm-muscles. None of the joints got well. All passed into a chronic state of subacute inflammation, and death followed a second hemorrhage within eighteen months.

In this case the joint-lesions were seen before and also after the cerebral lesion.

M., sixty-four years old, a physician, was well as to heart, kidneys, and arteries, which to appearance were unusually free from disease. For two years before his paralysis he was subject to nearly constant pain in the muscles of the right arm and leg; occasionally, but rarely, he had slight pain in the knee-joints and shoulder-joints; none in the smaller articulations. Occasionally the pain was so severe in all of the right-side muscles of limbs and trunk as to confine him to his bed for a week.

In June, 1869, a violent bout of pain, still only on the right side, was followed on the second day by sudden and incomplete loss of use of the right leg and arm, without disturbance of consciousness or of sensation. Within the next three years he had three attacks of hemiplegia, none severe, but each of them preceded by a similar onset of muscular pain and tenderness. He finally died of pneumonia.

I saw many years ago a middle-aged woman who was seized, with no known cause, with violent pain in the right arm and leg. There were no joint-lesions. The pain was agonizing. Within thirty-six hours she had a quite complete attack of hemiplegia on the same side, after which the pain slowly faded away and never returned. She made a good recovery and died years after, of lung-disease.

I could readily add to these cases. To observe one-sided pain or joint-lesions as prodromes or remote antecedents of cerebral lesions is not exceedingly rare. I have seen one such case within a year, and in it the muscular pain, as is not uncommon, slowly passed away with the paralysis.

It is, of course, easy to dismiss these cases as rheumatic, but this will hardly satisfy the modern clinical observer. Certainly they should suggest inquiry as to whether or not incipient brain-lesions, finally productive of paralysis, may not, either directly or through an influence on the cord, occasion morbid phenomena simulating rheumatic symptoms.

It is, of course, conceivable that the many cases I have seen may, one and all, represent the coincidental occurrence of unilateral rheumatism with a sequence of hemiplegia. But there is another explanation which is possible, and for this reason I desire to call attention anew to the antecedents and consequences of certain hemiplegias. If, as I and others have seen, inflamed joints may follow within from one to four days upon certain hemiplegias, it seems unlikely that their presence is due to spinal changes, or to these alone, unless these changes be far more rapid than we at present conceive them to be. If they are due directly to the immediate influence of the brain-lesion or to its effects on the yet unaltered cord, then even the more remote joint-lesions may have a like origin. Really, it does not as yet seem to be quite sure that the cord is always or alone responsible, or that the joint-troubles as well as the pain may not have their origin in the cerebral centers.

Another rare consequence of hemiplegia of late origin is the, as yet, undescribed occurrence of nodes on the periosteum. These still further add to the rheumatic picture presented by certain palsied limbs. I speak of these nodes as being, so far, undescribed, for in a wide search I find no mention of them, and they appear thus far to have escaped the attention of clinical observers.

I first saw them some years ago in a workman about forty-five years old. He was a plumber, but had no evidence of lead-poisoning, which, in fact, is scarcely ever seen in this class of mechanics. The patient had never had any genital malady and was in remarkable health until he had, after over-work in hot weather, an attack of left hemiplegia. Unconscious for a day, he made a fair recovery, except as to his arm, in which during two or three months developed late rigidity and joint-lesions. The knee, which is rarely affected, suffered, although slightly. In examining with care the state of this man's joints I found, about three inches above the ankle, an elongated, very tender node about an inch wide, and at the insertion of the deltoid a second, still more prominent. Interested in these lesions, I asked Dr. Maury, as an expert in syphilis, to re-examine the case. He came to the conclusion that there were no evidences of this malady. A long and active course of treatment with iodids and mercury failed to alter the nodes in the least degree, and I came at last to the conclusion that, like the joint-lesions, they were indirectly the offspring of the cerebral malady. I have since then seen similar cases, but of these I have no notes. In 1891, however, I saw a striking case which in very interesting forms illustrated both this lesion and the earliest case of post-hemiplegic joint-alteration, if it was that, which I have ever seen.

G. W., fifty-eight years of age, was a manufacturer in active business, of good health and habits, of moderate indulgence as to wine and tobacco. He has never had syphilis, and there was no obvious disease of the heart or vessels, and no renal disorder. He is subject at times to have, for a week or more, deposits of urates in the urine passed at night. On July 20, 1891, after a severe mental and moral strain, which necessarily lasted during four hours, he went to a friend's house to rest. As he was about to lie down on a bed, he reeled and fell. The left arm, on which he leaned against the bed, was somewhat twisted, and possibly strained, as he fell on the bed. He was found unconscious, and with entire paralysis of the left side. In twenty-four hours he was conscious of his surroundings. His speech was long affected, and the tongue was protruded far to the left. The leg recovered fairly well, but, when first seen by me—November 10, 1891—the foot still dragged a little; the arm was helpless.

The day after the paralysis he felt pain in the shoulder and down the outside of the arm. From this date he had increasing pain, swelling, and tenderness in this joint. In August the elbow became painful, and early in September all the joints of the left hand were inflamed. There was early rigidity, and finally, later stiffness, with violent contraction of the forearm muscles, so that the nails indented the palm. There has been little gain as to these symptoms, but the pain has become less severe. At the deltoid

insertion a node, three inches by one, of irregular form and quite prominent, could be felt. It was plainly periosteal and painful in varying degrees. On the ulna, above the wrist, was a second node, and above it a smaller one, both very distinct and also tender.

The foot was somewhat contracted. All the nails grew very slowly for two months. Sensation is slightly defective as to touch only on the palmar faces of the first and second digits.

The tongue is still protruded to the left, and speech is not quite perfect.

When last seen, in May, 1892, there was less pain, but all of the joints of the left arm were tender, swollen, and useless. The nodes were smaller.

This case seems to me interesting. It is possible that the shoulder-joint may have been twisted in the fall, and that this accounts for the very early inflammation which, later, may have owed its continuance to the paralysis. I have, however, seen one case in which the joint-lesion came on within thirty-six hours, and others in which it came on within four days. Therefore, it is possible that in this case the shoulder-trouble may have been the immediate offspring of the brain-lesion.

The mechanism of the production of these very common incidents of hemiplegia is still a difficult question. Perhaps a careful study of the post-mortem chemical state of the muscles may help us. But it should come immediately after death. It is quite possible that the nutritive disturbances of a palsied limb may evolve, locally, products which give rise to these pseudo-rheumatic results, and as nerve-lesions clearly alter the skin-secretions, as I have elsewhere shown, they may as likely evolve within the limb chemical products favorable to joint-disease. It is not enough to say that these are caused by altered nutrition. The nodes I describe are also one more addition to the resemblance of a palsied to a rheumatic limb, and, small as is their importance, it is, I think, of value to note their occasional presence.

When acute unilateral pain immediately precedes the hemiplegia of the same side—and such a sequence should lead us to reconsider the more doubtful instances, in which pain and joint-lesions more remotely but more continuously antedate the palsy—I have myself no doubt that pain and many other sensations may be of cortical origin.[1]

Honors to Virchow.—The visit of Professor Virchow to London was simply a series of ovations, banquets, and receptions. Honors and attentions were showered upon the great man from all sides. The Croonian oration was a most brilliant address. Among other distinctions the honorary degree of D.C.L. was conferred upon Virchow by the University of Oxford, and that of Doctor of Science by the University of Cambridge.

[1] See an interesting paper on "Brain-itch," by Dr. Bremer, of St. Louis, Review of Insanity and Nervous Diseases, December, 1892.

CLOSURE OF THE EAR BY GROWTHS OF BONE; REMOVAL OF BONY OBSTRUCTION; CURE OF OTORRHEA AND OF DEAFNESS. THREE CASES; DESCRIPTION OF OPERATIONS, INSTRUMENTS, Etc.

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ON assuming the care of a case of inflammation of the middle ear, or deep meatus, the practitioner may felicitate himself if he find the lumen of the canal so far preserved as to permit of easy inspection and local treatment of the affected parts. In the more severe cases this physical condition rarely obtains, except in the earliest stages, at which time it is unfortunately popular for the patient to seek relief, first, by local maltreatment, self-inflicted, under the direction, possibly, of the apothecary, the domestic adviser, or other officious layman. As a rule, such folly on the patient's part but increases his suffering, inducing inflammation and swelling of the soft parts of the canal, with reduction of its lumen; so that by the time he comes under the care of the physician there may be a narrowing of the caliber of the canal so great as to render management of the case a task of great difficulty. But even if this process should have advanced so far as to entail complete membranous atresia of the canal before presenting to the physician, it may nevertheless be deemed far preferable to that condition occasionally met with in these cases, in which inspection and local treatment of the inflamed parts are rendered extremely difficult and unsatisfactory, if not quite impossible, through reduction of the lumen of the canal by a growth of bone from the walls. In such a case progressive exostosis or hyperostosis may have already advanced so far that atresia of the canal is imminent, sometimes established.

Such a condition may, indeed, at any time be very unexpectedly encountered. For instance, I have already met with it four times. In this emergency prompt and active interference on the part of the attending physician is demanded, as hearing, and even life itself, may be lost by temporizing—as witness, for instance, the significant case reported in the *Boston Med. and Surg. Journal* of April 18, 1878, by Dr. J. Orne Green, of Boston, Massachusetts.

As regards this interference, however, one may well wonder at the disclosures of medical literature. A search through the older writings on the subject of closure of the ear by a growth of bone brings to light a most astonishing record of the struggle of our professional ancestors with this

stubborn enemy—a record which to him who reads between the lines proves suggestive of the nerve and desperation with which they wielded the rude and inefficient therapeutic weapons of their day in this serious conflict. To those afflicted with the disease in former days, grave must have been the prognosis declared, to compel, as it did, their submission to the intense and prolonged agony inevitable upon the surgical operation before the days of anesthesia and perfected mechanical arts.

Consider, on the other hand, the manifold advantages of our modern method of dealing with such aural bony growths by means of the dental engine. In operating with this instrument, the hand-piece may be held and guided like a pen, skill and attention being addressed principally to directing the reamer, or burr, inasmuch as this operates, with but slight manual pressure, mainly by the rapid revolution of its cutting edges. A little experience in the use of the dental engine and drill is sufficient to educate the operator in determining by touch and resistance the nature or condition of the tissue upon which the tool is operating, thereby affording another and more reliable indication as to the desirability of extending or terminating the process of operation at that particular spot. With this there is a minimum of risk of injury to contiguous or neighboring healthy parts through direct or through transmitted force. In careful hands this instrument cannot slip away or plunge. No concussion, no cracking, no roughness, no projecting spiculæ, no splinters of bone—only a smooth, clean-cut surface marks its trail.

These, and doubtless many other, advantages of this resource will be obvious, it is hoped, in the practical demonstration of its employment in the cases herewith reported, which are fairly typical of the disease and of the modern method of mastering it.

CASE I.[1] *Bony growth almost closing ear; purulent inflammation of middle ear; deafness, gradually increasing; removal of bony obstruction; cure of otorrhea and of deafness.*—This patient was a tall, well-proportioned, ruddy-complexioned German, twenty-five years of age, and unmarried, whose occupation necessitated frequent and prolonged out-of-door exposure. In the month of December, 1888, he called, seeking relief from otorrhea and gradually-increasing deafness of the left side, and for removal of a tangible obstruction from the affected ear. It was while indulging in his long-established, pernicious habit of picking his ears with a brass pin, that he first discovered this condition of the ear.

The patient was abstemious in his habits; had always been healthy up to the time of the present illness; and his family physician affirmed that neither the patient nor his family had at any time given any evidence of congenital or acquired constitutional or specific morbid taint.

The aural trouble had begun in the early spring of the preceding year, by the formation of a "boil" in his left ear, "which had been 'mattering' ever since." By local maltreatment, and by neglect, for which he himself was alone responsible, his malady was aggravated.

On the first otacoustic examination, it was found that with the affected ear he could hear ordinary voice at ten feet, and a forty-eight-inch watch[1] at less than a distance of one inch—a reduction of hearing-power for the watch to less than one-two-thousandth of the normal.[2] Tests with the tuning-fork demonstrated that the deafness was due not to impairment of function of the auditory nerve, but rather to some mechanical interference with the transmission of sound-waves to the nervous apparatus of hearing. The hearing-power of the right ear was found to be slightly impaired by alteration of tension and of mobility of its transmitting mechanism — due, doubtless, to fatigue and exposure incident to the pursuit of his occupation.

Just within the outer extremity of the left external auditory canal, the lumen appeared almost wholly obliterated by the presence of some foreign body or other adventitious substance. Beyond this, however, a purulent, slightly mephitic discharge was found oozing. The obstructing body seemed extremely hard and immovable, and was covered with a thin, glistening, pearly membrane, not hyperesthetic, and but slightly movable upon it. The lumen of the canal was found almost closed by it, with the exception of a very narrow passage, crescentic on transverse section, forming about three-fifths of a circle. The greatest width of this passage was at the posterior-inferior canal-wall and was two-thirty-seconds of an inch wide, while at the anterior-inferior and posterior-superior canal-wall, its width was one-thirty-second of an inch. The tumor, or exostosis—for such it proved to be—was attached to the anterior-superior wall of the osseous meatus. A small silver probe, bent into a curve near its bulb, could be passed inward under the obstruction, and, on one side of it, upward. Exploring with this, it was found that the surface of the superior canal-wall, on the inner side of the obstruction, merged gradually into the inner surface of the tumor, continuing thus downward toward its lower part. On its outer side, however, high up, at the line of junction of the tumor and superior canal-wall, and just within the drooping edge of the cartilage of the concha and

[1] Case presented to the St. Louis Medical Society at its meeting, December 21, 1889; reported in abstract in its official organ, the St. Louis Courier of Medicine, January, 1890.

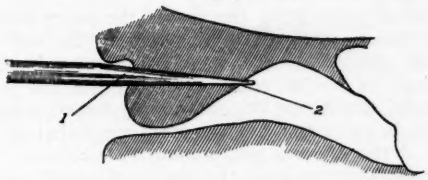
[1] By "a forty-eight-inch watch" is meant a watch whose ticking is heard by the normal ear as far distant as forty-eight inches.

[2] As *the intensity of sound varies inversely as the square of the distance from its source*, hearing-power for a sound of fixed intensity varies directly as the square of the distance (from the ear to the source of sound) at which that sound is heard; as, for example, in the present case, in which the distance at which the watch was heard was less than $\frac{1}{48}$ of the normal, which, squared, would give the hearing-power for the watch: "less than $\frac{1}{2304}$ of the normal."

meatus, there was, on the contrary, a distinct transverse groove. (1, Fig. 1.)

The diagnosis of progressive exostosis of the external auditory canal with purulent otitis media was obvious. Deafness and probable premature death, if the tumor were not removed, were prognosticated, and an immediate surgical operation was recommended.

Fig. 1.



The dental engine was used—one with an extra-heavy sleeve, cable, and hand-piece, designed for minor surgery, and manufactured by the S. S. White Dental Manufacturing Company[1] of Philadelphia and New York.

The tools, burrs, reamers, etc., kept in stock, for use with the engine selected, being too large and coarse for my purpose I hastily constructed one out of a dental plugger (Fig. 2), so shaped as to operate either forward or laterally, slowly and safely.[2]

Fig. 2.

Before the operation, there had been prepared carefully a large number of swabs or dossils of absorbent cotton-wool upon the extremity of long, slender splinters of wood, for instant use when wanted for removing blood or other discharges. As gas-light was, upon this occasion, to be employed for illuminating the operative field, chloroform, being non-explosive, was selected as the anesthetic.

The operation was begun by boring with the tapering reamer (Fig. 2), almost directly inward and a trifle downward (1, Fig. 3) from the middle point of the groove on the upper, outer side of the tumor (1, Fig. 1; 1, Fig. 3). Through the growth, which proved to be very hard—in fact, a typical "ivory exostosis"—the reamer made progress slowly, but was at length felt to have perforated it (2, Fig. 1). It was now pressed laterally, broadside, against, first, the posterior (2, Fig. 3), and then the anterior portion of the neck of the tumor (3, Fig. 3), which had remained between the first drilled canal (1, Fig. 3) and the sides of the base. The greater portion of the growth was thus detached; and was then removed from the lumen of the canal; after which the canal was thoroughly cleansed with a stream of very warm carbolized water. The cotton-wool dossils were then used in rapid succession to dry the canal sufficiently for brief inspection. The stump of the tumor found remaining was then brushed from side to side with the broad side of the reamer, parallel to what would have been the

Fig. 3.

normal surface of the canal-wall at the base of the tumor. This was continued until the stump of the tumor was reduced as nearly to the normal surface of the canal-wall as the swollen soft tissues would permit (4, Fig. 3). An aural speculum was then readily introduced, and the macerated drum-head could for a moment be seen. Hemorrhage was finally checked by irrigation with a stream of sterilized hot water, after which the parts were carefully dried, a generous quantity of powdered boric acid insufflated into the canal, a dry antiseptic dressing applied to the auricle, and the patient put to bed.

Owing to the profuse hemorrhage which persistently filled the auditory canal from the time when the drilling had begun, the operation was of necessity performed, virtually, without any visible guide, by touch alone; and under the circumstances it was deemed hazardous and unnecessary to attempt at that time removal of the deep-lying portion of the stump of the tumor by drilling toward the base of the brain in the swollen soft tissues of the upper canal-wall with the sharp point of the reamer, which alone could effect this. This will explain why, after the soft tissues of the canal had retracted to their normal position, a very small portion of the stump of the tumor was found unremoved, projecting slightly from the canal-wall. It was, however, so small, so invisible to bystanders, and interfered so imperceptibly, if at all, with the performance of any essential function of the parts, that another operation seemed unwarrantable.

The after-treatment of the ear consisted mainly in flushing, sometimes with a solution of mercuric chlorid, sometimes with hydrogen dioxid, followed by insufflation of an impalpable powder of boric acid. Redundant growth of tissue was checked by applications of silver nitrate.

[1] This company manufactures a surgical engine of the Bonwill pattern also, a dental engine reinforced with a crank for hand-power, whereby much greater force, and a speed of twelve thousand revolutions can be obtained. The Bonwill dental engine is readily, and at trifling expense, convertible into the surgical engine. The hand-piece tools designed for minor surgery, adjustable to the engine, are greatly varied in form and size, and are well described in the circulars issued by the manufacturers.

[2] This tool may be briefly described as follows: It is constructed of soft steel; is four and one-fourth inches long; projects two inches beyond the extremity of the hand-piece, when adjusted therein; has, at the end, a working surface one inch long, which, irregularly and shallowly grooved or fluted longitudinally, tapers to a quadrilateral-pyramidal point one-thirty-second of an inch in diagonal. The shaft of the tool is three-thirty-seconds of an inch indiameter. The grooves are shallow, small, and irregular; and no opportunity was afforded to improve the instrument by tempering, which may have served to protract the operation somewhat.

The patient now considers his hearing better than it was before he first suspected the development of his aural disease.

The part of the tumor removed entire at the operation is supposed to have been mislaid by the gentleman to whom it was handed for inspection, and has never been recovered. It may, however, be stated that it closely resembled that described in the record of the case next following.

CASE II.[1] *Bony growth almost closing ear; purulent inflammation of middle ear; deafness, gradually increasing; removal of bony obstruction; cure of otorrhea and of deafness.*—A clerk, twenty-one years of age, unmarried, in excellent general health, consulted me in the month of June, and gave the following history:

Three years previously his right ear had "left stopped up" for several days, when, without any treatment, it "opened up again." With the exception of pruritus of the auditory canal, no further aural discomfort had been experienced until three weeks before the time of his first visit to me, when it had "stopped up" as in the previous attack, and had become quite deaf. He had then picked the affected ear with a match, and had "made it sore." Afterward he had dropped melted vaselin into it. To relieve the itching in the right ear, he had long been in the habit of "picking" therein with a match, toothpick or brass pin. For four days and nights preceding his first visit to me this ear, although not tender, had been painful; the pain, which was worse on lying down, and at night, had been so severe as to prevent sleep during the greater part of the night preceding that visit. The patient had long been in the habit of using tobacco freely. On otacoustic examination, it was found that with the affected ear he could hear a forty-eight-inch watch upon pressure-contact only, and loud voice at a distance of three feet. On testing with tuning forks, the function of the auditory nerve seemed unimpaired.

Physical examination showed that the canal of the affected ear was occluded, at about one-quarter of an inch from its outlet, by some adventitious substance, which proved to be an exostosis growing from the posterior-inferior wall of the osseous meatus.

This tumor had already developed so far that the only portion of the lumen of the canal left unoccupied by it was a narrow passage, concentric on transverse section, extending around the tumor for about two-thirds of the circumference of the canal, both of the horns of this crescentic passage pointing downward and backward. At its broadest part, which is at the anterior-superior canal-wall, this passage measured in width about three-thirty-seconds of an inch. By exploring the space beyond, with a curved probe, the tumor appeared to be somewhat pedunculated.

On searching for the probable cause of the pruritus, which had led to the formation of the habit of "picking" the affected ear, and for a source of reflex aural irritation—which had perhaps otherwise contributed to the development of the exostosis, by inducing vaso-motor disturbance—nothing seemed obvious except a very carious upper molar tooth upon the affected side.

Three days after the patient's first visit, the growth was removed by surgical operation.

Except when stated to the contrary in the following description, the operation was in detail similar to that just described.

Before penetrating the tissues the cavity beyond the tumor was cleansed by syringing through the small passage of the canal with a hard-rubber syringe of special construction.[1] From the space beyond the tumor this instrument forced away a mass of cerumen; desquamated, macerated epithelial detritus; and pus, somewhat mephitic. All the parts having been thoroughly cleansed, on the aseptic principle, and then as far as possible dried with the absorbent cotton-wool dossils, a dipper-shaped, aural speculum (Fig. 4) was introduced into

FIG. 4.

FIG. 5.

the auditory canal, in such a position that the handle lay snugly against the auricle, behind the tragus, and upon the site of the normal spina helicis, where it was retained by pressure of the finger of one of the physicians assisting (Fig. 5). This was the second time the instrument had been used.[2] The dental

[1] Case presented to the St. Louis Medical Society, at its meeting, June 25, 1892; reported in abstract in its official organ, the Medical Fortnightly, October 1, 1892.

[1] This was made for me by the W. F. Ford Surgical Instrument Company, of New York, expressly for the purpose of injecting a fine and copious stream of liquid through a very small perforation, sinus, or other passage—for example, such as that in the present case. It has several different nozzles; is fashioned after the principle of the middle-ear syringe of Dr. Clarence J. Blake, of Boston, Mass. (Amer. Journ. of Otology, N. Y. 1880, ii, 5–8), and, like this, has a small glass cylinder, adjustable between the nozzle and syringe proper, whereby one can, at will, inject, through a very narrow opening or canal, a small and specified amount of a medicated liquid, without necessarily first introducing any part of this liquid into the syringe proper.

[2] This little instrument had been designed and constructed by me especially for, and was first used in, the operation in the case reported later, which chronologically takes precedence of this. The dimensions of the instrument are these: Of the slightly curved handle—length, one inch; least breadth, three-sixteenths of an inch; greatest breath, four-sixteenths of an inch. Of the speculum proper—Length, twenty-thirty-seconds of an inch;

engine used here was the same as that in the case first reported, but the reamer with which the pedicle of the exostosis was divided (Fig. 6) was different from the tapering one before used (Fig. 2) in being deeply, sharply, and regularly fluted, hard-tempered, and, at the thickest portion of the working surface and shaft, four-thirty-seconds of an inch in

Fig. 6.

diameter. It had been made for this particular operation by a skilled mechanic, a former patient of mine.

With this reamer, the drilling was begun at the posterior-inferior part of the tumor, almost against the canal wall, the tool being directed inward, upward, and forward, until it was felt to have emerged from the other side of the growth; when, by the lateral motion of the reamer, broadside, as in the preceding case, the pedicle of the tumor was divided. The detached portion was then removed from the canal, and has been preserved. It is irregular in form, and measures, approximately, five-thirty-seconds by six-thirty-seconds by eight-thirty-seconds of an inch.

After mapping out as carefully and accurately as possible the site and shape of the remaining stump, a tool (Fig. 7), bearing a round, fluted burr, six-thirty-seconds of an inch in diameter, was employed to dress off salient points to the plane of the normal surface of the canal.[1]

Fig. 7.

The parts were now freely syringed with very warm sterilized water, and afterward cleansed with hydrogen dioxid until hemorrhage ceased. The canal was then filled with loosely insufflated impalpable powder of boric acid, and finally closed snugly with a wad of absorbent cotton-wool.

Incidentally, it may be remarked that the hydrogen dioxid used seems to act as a hemostatic. As a deodorant, disinfectant, and antiseptic, it has, in my experience, given entire satisfaction.

The operative field having from the outset been hidden from sight by persistent hemorrhage, the operation was done, virtually, with no visible guide, by touch alone.

Within two days after the operation the hearing-distance of the affected ear for a forty-eight-inch watch had increased to three inches. Upon the third day the irregular mass of ragged, soft tissues overlying the site of the tumor was removed, close down to the surface of the canal-wall. Several days after this the carious molar tooth was extracted.

Treatment directed toward the purulent otitis media availed so far that, ere long, there presented indications for a compact dressing to the perforation of the drum-head. A paper disc or dressing was then applied after the manner suggested by Dr. Clarence J. Blake, of Boston.[1]

Within three weeks after the time of the operation the canal-wound had healed, the perforation of the drum-head had closed, and the paper disc had been removed. Five weeks later, the hearing of the affected ear, for voice and whisper, proved to be almost normal; and with this ear the man could hear the forty-eight-inch watch at eleven inches.

Case III.[2] *Bony growth completely closing ear; purulent inflammation of the middle ear; deafness, almost total; artificial auditory canal bored through five-eighths of an inch of bone; cure of otorrhea and of deafness.*—This patient, a man, aged thirty years, unmarried, following an out-of-door occupation, and having had good general health, first applied for treatment in the month of January.

In March of the preceding year he had been struck over the left eye and ear by a falling pine-knot, the left auricle being thereby contused and the attachment of its crus helicis severed. For three weeks thereafter he had suffered discomfort in the injured ear, when purulent otorrhea became established. This continued for six weeks, when, without medicinal treatment, it ceased of itself. The crus helicis became attached to the skull, and healed with the formation of a large scar.

On a night of the following October, he was struck upon the occiput and inferior maxilla with a bar of iron; and fell unconscious. It is said that he sustained, at that time, a scalp-wound, and a compound comminuted fracture of the inferior maxilla. There are, however, reasons for supposing that he sustained other injuries as well; for after the occurrence his left nostril bled awhile, and he suffered pain and other discomfort in his left ear for a week, when a purulent otorrhea began. With some unknown remedies (prescribed and dispensed by a druggist, so called) he suppressed the otorrhea, as he supposed, the ear in consequence feeling as if closed. It then became painful, the pain gradually increasing until his suffering became intolerable, when, in desperation, he "opened the ear" himself, with a needle, the otorrhea thus becoming reëstablished and continuing thereafter for a month, finally ceasing spontaneously.

After the removal of several sequestra and carious

diameter of lumen (caliber) at outer larger circular rim, twelve-thirty-seconds of an inch; at inner smaller elliptical rim (longitudinal) nine-thirty-seconds, (transverse) eight-thirty-seconds of an inch. A set of such aural specula can be obtained of Messrs. A. S. Aloe & Co., of St. Louis.

[1] This instrument was made expressly for this operation by Messrs. A. S. Aloe & Co., of St. Louis.

[1] See C. J. Blake: Report of the First Congress of the International Otological Society, New York, September, 1876, pp. 125–132. Also, R. Barclay: Transactions of the American Otological Society, Twenty-third Annual Meeting, New Bedford, Massachusetts, 1890, pp. 564-573.

[2] Case presented to the St. Louis Medical Society at its meeting, June 25, 1892; reported in abstract in its official organ, the "Medical Fortnightly," October 1, 1892.

teeth from the maxilla, its fragments united and the external wound soon healed. There persisted, however, in the left ear, tinnitus, autophony, and deafness, for the relief of which he, in the following January, placed himself under my care.

On otacoustic examination at that time, the hearing for the tuning-fork by bone-conduction was found better than that by aërial conduction in the left, worse in the right ear; and by aërial conduction, better in the right than in the left ear. He heard, at ten feet distance, loud whisper with the right, loud voice with the left ear. The hearing-distance for a forty-eight-inch watch with the right ear was fifteen inches. This watch was unheard by the left ear, even when pressed tightly against the auricle. It could, however, be heard by this ear after Politzer-inflation.

On physical examination of the left ear, the first thing to fix the attention was the scar at the crus helicis, and slight deformity of the auricle due to its contraction. The auricle was somewhat displaced downward and forward. Further, the left external auditory canal was found entirely closed by a hard, evidently bony septum, whose outer surface was twenty-thirty-seconds of an inch from the tip of the corresponding tragus. There was a small transverse dimple in the external surface of this septum just above the center, giving it somewhat the semblance of a hopper. The septum seemed bony throughout, and was covered with a continuous, tightly adherent dermal membrane.

Respecting the condition of the auditory apparatus of the left side, it was inferred that the essential portion, in the labyrinth, was intact, and that the transmitting mechanism—affected as it had seemed to be by Politzer-inflation—might possibly have so far escaped destruction as to be serviceable for better hearing in case the bony obstruction to the entrance of sound-waves thereto should have been removed; and it was thought that the latter might be effected by operation, and so the hearing improved.

It was purposed to do two operations: one with a view simply to establishing an opening through

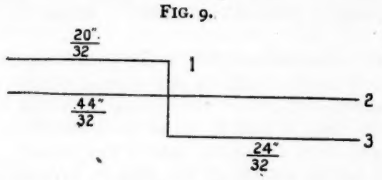
FIG. 8.

the bony septum of the canal, whereby the deeper spaces might be placed in an aseptic condition, and the landmarks for a concluding operation be the better determined; the other, the finishing one, with a view to enlarging the channel first made until it should equal in diameter the lumen of the canal of the other ear; and then to insert and retain a suitable canula-eyelet, as it were, of platinum or of gold, similar in shape to one of hard rubber (Fig. 8) made for similar indications in a case of membranous atresia auris, pathologically unique, upon which I had operated.[1]

[1] See case of "Tubercular Syphilide of the Auricle—becoming Serpiginous—with Ulceration and Sequestration of the Cartilage of the Concha, Tragus, and Canal, followed by Membranous Atresia: Deafness; Operation; Cure," Journal of Cutaneous and Genito-Urinary Diseases, New York, March, 1888, pp. 81-86.

The patient having consented to submit to surgical interference, there were to be determined, as carefully as possible, the dimensions of the operative field; the depth to which it was permissible to trespass, and the direction in which one might proceed to best advantage, without incurring unnecessary risk. For with all accurate data possible under the circumstances, the minimum of risk was at best necessarily great. In the unaffected (right) ear, the distance from the tip of the tragus to the drum-head was one inch and twelve-thirty-seconds—forty-four-thirty-seconds of an inch (2, Fig. 9). In the affected (left) ear, the distance from the tip of the tragus to

FIG. 9.



The figure is 50 per cent. larger than actual measurement.

the outer surface of the bony obstruction was twenty-thirty-seconds of an inch (1, Fig. 9). Assuming, then, as equal in the two ears, the distance from the tip of the tragus to the site of the drum-head, the difference between the former measurements (forty-four-thirty-seconds and twenty-thirty-seconds of an inch)—or twenty-four-thirty-seconds of an inch (3, Fig. 9)—would be the distance from the outer surface of the bony obstruction in the left ear to the site of its corresponding drum-head—the limit, in depth, of the operative field. This was presumed as one condition of the operation.

The determination of the direction and lateral dimensions of an artificial auditory canal, however, was a problem far more serious and difficult, particularly as the auricle upon the affected side had, through injury, been displaced and distorted, and no longer corresponded in position and form with its mate on the other side. Notwithstanding, a solution of the problem was attempted thus: First, a thorough familiarity with the peculiar configuration and proportions, absolute and relative, of the healthy (right) ear was acquired. Then, a careful estimate was made of the probable degree of displacement and distortion of the injured (left) auricle—for the septum came rather close to the outlet of the canal, thus rendering uncertain that landmark. Assuming, then, that the left ear had been, originally, *mutatis mutandis*, the counterpart, proportionally, of the right, due allowance was made for the amount of displacement of the left auricle as estimated, and the resultant was accepted as the proper configuration and proportions of an artificial auditory canal; and the correctness of this estimate was demonstrated practically at the operation hazarded upon its presumption. Shortly after the maxillary wound had healed, the operation was performed. Except

when stated to the contrary in the description below, the operation was in detail similar to that last described.

After the patient had been anesthetized, and the dipper-shaped aural speculum (Fig. 4) secured in place by pressure of the finger of one of the physicians assisting—the head remaining in the recumbent posture (Fig. 5)—the tapering reamer (Fig. 6) was guided directly through the middle of the bony septum, which, at a depth of five-eighths of an inch it perforated, entering the space beyond. This space was now cleansed by syringing through the new canal with the fine-stream syringe already described. There escaped much epithelial detritus, blood, and what seemed to be pus, but whose character was not certainly established at the time. The deep space proving, on being probed, ample, laterally, it seemed advisable to enlarge the new canal at once; and this was, therefore, done with the round burr (Fig. 7), six-thirty-seconds of an inch in diameter. As probing then showed that the canal might, with advantage, be still further enlarged, a larger elliptical burr (Fig. 10) was passed to the depth of twenty-thirty-seconds of an inch.[1]

Fig. 10.

The ear was then freely flushed with hydrogen dioxid and the parts afterward dried as well as possible with the absorbent cotton-wool dossils. No drum-head was positively identified, although, from the appearance of the bottom of the space entered, it seemed as if the artificial canal had terminated at the membrana flaccida, or else within the atticus tympanicus—it could not be determined which, owing to the macerated condition of the parts, the hemorrhage, and the purulent discharge which followed the operation. A piece of soft-rubber tubing, seven-thirty-seconds of an inch in diameter, sterilized, was then introduced and secured within the artificial canal, and an antiseptic dressing was then applied.

Five days after the operation, there was, upon tympanic inflation, a perforation-whistle, so called. A drum-head was still indistinguishable.

The hearing improved steadily, until with the affected ear the patient could hear a low voice and loud whisper at a distance of thirteen feet, and a forty-eight-inch watch at two inches. Still later, he could hear with it an ordinary voice at a distance of forty-five feet.

The lumen of the artificial canal, as is usual in such cases, soon began to contract, when a platinum tube, specially prepared, was inserted and worn in the canal without discomfort.[1]

Antiseptic treatment was maintained until the improvement in the otorrhea made it allowable for the patient to return to his home and the care of his family physician. There, no effort was made to retain the platinum tube within the canal; for upon revisiting me in the following month, the patient affirmed that the physician had not replaced the tube since the date of his return home. In consequence, the lumen of the canal had greatly contracted, the mechanical advantages gained by the operation had been to a great extent lost, and there was still a slight otorrhea. Altogether the result was unsatisfactory, notwithstanding the fact that the hearing had remained at its best.

When last seen the patient was wearing in the contracted canal compressed loops of fine silver wire.

Although the advantages of a finishing operation were urged upon him, he would not consent to further surgical interference—a fact much to be regretted, inasmuch as there is reason to believe that a complete cure might thereby have been effected.

At last report, the hearing had remained good.

3211 Lucas Avenue.

[1] The long diameter of this burr, continuous with the long axis of the tool-shaft, was twelve-thirty-seconds of an inch; the transverse, short diameter, eight-thirty-seconds of an inch. The flutes, or grooves, were cut deeply, sharply, and spirally, at an angle with the meridian of the burr, so to speak; and the tool highly tempered—altogether a most effective instrument for perforating bone.

THE ETIOLOGY OF CHOREA.

By B. K. RACHFORD, M.D.,
of Newport, Ky.,
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At the last meeting of the American Pediatric Society (Boston, May, 1892), I read a paper[2] on the "Anemia of Tuberculosis," wherein, from an inquiry into the blood-state of 218 convent girls, I demonstrated that tuberculosis of the blood-forming organs, and especially of the lymphatic tissues, is one of the most frequent causes of anemia. I further demonstrated that this lymphatic tuberculosis (scrofula[3]), although producing the most profound anemia, was very frequently concealed—that is, confined to the deep-seated or hidden lymphatic tissues of the abdomen and chest. I further insisted that this concealed form of tuberculosis was very common, and might readily be overlooked, if the superficial lymphatics gave no suggestion of the deep-seated lymphatic disease; and moreover, that the severity of the disease might readily be underestimated, even when the external lymphatics were involved, if one judged of the severity of the deep-seated process by the superficial glandular enlargement.

I also expressed the belief in this same paper that concealed scrofula was one of the most frequent causes

[1] This tube was made for the case by Henry M. Baird, D.D.S., of St. Louis, of whose skill therein I desire to make this public and grateful acknowledgment.

[2] Archives of Pediatrics. December, 1892.

[3] By scrofula is meant tuberculous disease of the lymphatic glands or the marrow of bones.

of those obscure and troublesome anemias that we are constantly called upon to treat. So important a cause of anemia did I find tuberculous disease of blood-glands to be, that I offered the following as a rule of practice, founded on the strongest of circumstantial evidence, that "well-marked anemia, without apparent cause, is strongly suggestive of concealed tuberculosis," and when to this is added a family history of tuberculosis and exposure to the contagion, I believed one was justified in making the diagnosis of scrofulous anemia. For further particulars concerning the relationship of scrofula to anemia I must refer the reader to my paper quoted, and ask him only to bear in mind, as he reads the following inquiry into the etiology of chorea, that scrofula, either external or concealed, is one of the most frequent causes of anemia.

It has been a common observation for many years that the most frequent pathologic condition associated with chorea is anemia. There are few facts more securely fixed in the medical mind than this, and it therefore does not require discussion.

Associating these two facts, it occurred to me that the anemia of chorea might in some instances be tuberculous in origin, and if so, might not this throw some light on the etiology and treatment of this obscure disease? The following investigation was therefore begun for the purpose of studying the causative influence of scrofulous anemia in the production of chorea.

Just at the time I began this inquiry the following case came to me in private practice. I recite it here, as it well serves the purpose of introducing my subject:

CASE I.—A girl, ten years of age, with a family history of tuberculosis on the mother's side. It is near the close of the school year, and she has been working hard. She has one sister younger than herself; both are slender, pale, and of a nervous temperament, and both have enlarged cervical lymphatics. The child never had rheumatism, and has no heart-murmur; she has a blepharitis marginalis and chronic coryza. Blood-examination shows 65 per cent. of the normal amount of hemoglobin, and 3,000,000 red corpuscles to the cubic millimeter. In short, she is a typical case of scrofulous simple anemia.

When she came under my observation she had had chorea for more than two months, and during all this time she had taken Fowler's solution without benefit. I continued this drug in large doses for two weeks, but getting no benefit from it, I concluded to treat the anemia, and let the chorea take care of itself. I prescribed fresh air, good food, and six grains of the saccharated carbonate of iron three times a day. Under this treatment the chorea rapidly improved. After two weeks the syrup of the iodid of iron was substituted for the carbonate, and this was continued for two weeks. During this time she rapidly gained in health and strength, and the choreic movements disappeared. The last blood-examination showed 90 per cent. of hemoglobin, and 4,500,000 red corpuscles to the cubic millimeter.

After one month of treatment she was entirely well, and has remained so ever since.

In the study of this case I recalled to memory the cases of chorea I had seen in private and dispensary practice, and was impressed with the belief that this case was a type of one of the most ordinary forms of chorea, and that in such cases as this the results of treatment indicated that the chorea was due to the scrofulous anemia. This belief led me to a more careful investigation of the subject, the results of which I here offer as a contribution to the study of the etiology of chorea. I wish especially to call attention to the table presented, and the deductions that are drawn from it, but before doing this I shall ask indulgence for reciting two or more cases of scrofulous chorea that have recently come under my observation:

CASE II.—M. Y., aged thirteen, with a negative family history, came to the clinic July 1, 1892, to be treated for an attack of chorea, from which she had suffered four weeks. She had continued to work in a tailor-shop till she could no longer hold anything in her hand. There had been frequent epistaxis; she had never had rheumatism, and there was no heart-bruit. The most marked symptom, apart from the chorea, was the profound anemia. Blood-examination showed 60 per cent. of hemoglobin, and 3,200,000 red corpuscles to the cubic millimeter. There was general lymphatic enlargement.

Treatment consisted in liquor potassii arsenitis, 5 drops three times a day, to be increased one drop a day for five days, then diminished one drop a day for five days.

After thirteen days of treatment, July 13th, the child was no better; I continued Fowler's solution, 5 drops, three times a day, and ordered syrupus ferri iodidi, 15 drops, three times a day. On July 18th the choreic movements were better, and I continued the iron, but discontinued the Fowler's solution. On July 25th she was improving slowly and the treatment was continued. On August 15th she was quite well.

I feel quite sure that in the treatment of this case the iron was a much more efficacious remedy than the arsenic.

CASE III.—L. R., thirteen years old, had a negative family history. Chorea had existed for two months, when, on August 19, 1892, she applied at the clinic for treatment; she had never had rheumatism, had no heart-bruit, was very anemic, and the cervical lymphatics were enlarged. Treatment consisted of syrupus ferri iodidi, gtt. 15, three times a day. On September 2d she was rapidly improving, and on September 12th she was discharged well.

Such cases as I have here reported are by no means rare. In truth, I am of the opinion that more than one-half the chorea-cases in dispensary

practice conform more or less closely to this scrofulous type, while only about 25 per cent. belong to the rheumatic type of the disease.

The following table contains all the cases of chorea of which I have any record. These cases are taken chiefly from the Children's Clinic of the Medical College of Ohio, and I am indebted to Dr. Frank Southgate for assistance in searching these records. The family histories in such records as this are necessarily incomplete, and "negative," or "good," is sometimes written when a family history of tuberculosis exists. The long-continued association in the medical mind of chorea and rheumatism makes it altogether probable that these histories record every semblance of rheumatism that the patient may have had. And the fact that scrofula and chorea have never been associated in the medical mind, as cause and effect, makes it also very probable that these histories do not record nearly all the cases of tuberculosis. This opinion is supported by the fact that in the recent cases of chorea that have come under our observation at the clinic we have found a much larger percentage of tuberculous cases than are found in the old records, which were made before tuberculosis was looked upon by us as a possible etiologic factor of chorea. For these reasons one may at least feel assured that the importance of tuberculous anemia as an etiologic factor in the production of chorea is at least not exaggerated in the table.

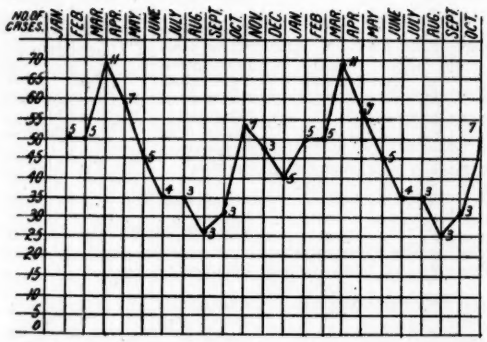
In the following table there are 61 cases of chorea. One of these cases gave a history of syphilis; 3 gave histories of scarlet-fever shortly before attack; 20 had heart-murmurs, but at least 7 of these were anemic murmurs; and of the 13 remaining cases, 5 gave no evidence of rheumatism; 14 gave histories of rheumatism, and in all but 4 of these cases there was a heart-bruit; 29 gave histories of tuberculosis; 16 gave negative family histories; 33 are recorded as anemic, and these 33 cases include all of the 29 tuberculous cases. In all the recent cases the diagnosis of anemia was made by a blood-examination.

These figures speak for themselves and clearly show that scrofulous anemia is a very important, if not the most important, etiologic factor in the production of chorea. Of the 61 cases of chorea, 29, or 48.2 per cent., have tuberculous anemia. Besides this, it is more than probable that some of the cases marked "negative" were really tuberculous, —that is to say, had concealed scrofula, a form of tuberculous disease which I have elsewhere shown to be of very frequent occurrence. We conclude, therefore, from a study of the facts of the table, that fully 50 per cent. of the cases of chorea occurring in dispensary practice have tuberculous anemia. That this tuberculous anemia is an important etiologic factor in producing the chorea is evidenced by the fact that when the anemia is treated with cod-liver oil and iron, the choreic movements disappear.

Name, or No. of history.	Sex.	Age.	Family history	Personal history.	Heart-bruit.	Anemia.	Date of beginning of attack.
868	M.	7	Negative	Rheumatism	Yes	...	March.
1121	M.	9	"	Negative	No	Yes	August.
1204	F.	11	"	"	"	...	July.
1246	F.	10	"	Tuberculosis	"	Yes	April.
1308	F.	6	"	Scarlet fever and nephritis	"	...	Jan.
1318	M.	10	Nervous	Tuberculosis	"	Yes	"
1339	M.	11	"	Epilepsy	"	...	April.
1440	M.	6	"	Scrofula	"	Yes	May.
1865	M.	9	Good	Scarlet fever and nephritis	"	...	June.
1950	F.	13	Rheumatic	Scrofula	"	Yes	March.
2034	F.	7	Negative	"	"	"	May.
2061	F.	7	"	Rheumatism	Yes	...	Oct.
2091	F.	10	"	Negative	...	...	June.
2142	F.	9	Good	Tuberculosis	Yes	Yes	July.
2556	F.	10	Negative	"	...	"	"
2667	F.	6	Nervous and tuberculous	Rheumatic	Yes	...	Oct.
2771	F.	11	Negative	Rheumatism	"	Yes	Nov.
2280	F.	4	"	Tuberculosis	"	"	Jan.
2308	M.	9	"	Negative	No	...	Feb.
2830	M.	7	"	"	"	...	March.
2850	F.	8	"	Tuberculosis	Yes	Yes	"
2863	M.	10	"	Rheumatism	No	...	April.
3174	F.	12	Nervous	Negative	"	...	Oct.
3260	F.	11	Negative	Rheumatism	Yes	...	Dec.
3468	M.	10	.....	"	"	...	May.
3731	M.	10	Nervous	Scrofula	No	Yes	March.
3935	M.	11	Negative	Negative	"	...	April.
4300	M.	13	Tuberculous	Tuberculosis and scrofula	"	Yes	"
4525	F.	10	Good	Scrofula and rheumatism	"	"	March.
3165	M.	11	Negative	Scrofula	"	"	Nov.
3213	F.	10	Good	Fright	"	...	Dec.
3331	F.	10	Negative	Negative	Yes	Yes	Feb.
36	M.	15	"	"	No	...	April.
55	M.	11	Rheumatism	"	Yes	...	Oct.
57	F.	11	Nervous and tuberculous	Scrofula	No	Yes	"
84	F.	8	Negative	"	"	"	Nov.
98	F.	8	"	"	"	"	Dec.
103	F.	11	"	Rheumatism	Yes	...	"
135	M.	8	Tuberculous	Tuberculosis	...	Yes	"
151	F.	12	Nervous	Negative	No	...	Jan.
190	F.	10	Negative	Scarlet fever	"	...	Feb.
252	F.	11	Syphilitic	Negative	"	...	March.
255	F.	9	Nervous	Scrofula	"	Yes	"
261	F.	8	Negative	Negative	"	...	"
319	M.	11	"	Rheumatism	Yes	...	April.
335	M.	8	Nervous	Scrofulous	No	Yes	May.
341	F.	12	"	Negative	Yes	...	"
365	M.	12	"	Scrofula	"	Yes	June.
572	M.	13	Tuberculous	Tuberculosis	No	"	Sept.
592	F.	10	Negative	Scrofula	Yes	"	"
599	F.	10	"	Negative	No	...	"
622	F.	10	"	Rheumatism	"	...	Oct.
629	F.	10	Nervous	Tuberculosis	"	Yes	"
777	M.	8	Negative	Rheumatism	Yes	"	Jan.
810	F.	9	"	Negative	No	...	Feb.
A. B.	F.	10	Tuberculous	Scrofula	"	Yes	March.
M. Y.	F.	13	Negative	"	"	"	June.
L. R.	F.	13	"	"	"	"	August.
H.H.	F.	10	Tuberculous	Scrofula and rheumatism	Yes	"	March.
C. L.	F.	13	"	Scrofula and rheumatism	No	"	Feb.
R. S.	M.	9	Rheumatic	Scrofula	Yes	"	August.

The appended chart strikingly demonstrates the seasonal relationship between chorea and tuber-

culosis. The tuberculosis line is constructed from 407 cases of tuberculosis taken from the Children's Clinic of the Medical College of Ohio. The date of first visit is the date used. The numbers placed along this line denote the number of cases of chorea that have occurred in each month of the year. These chorea cases are taken from the same records and cover the same period of time.



I have, in a paper soon to be published,[1] discussed at length the relationship of chronic anemia to the neuroses of childhood, and have cited the experiments of V. Aducco,[2] to prove that chronic anemia produces an excitability of the nerve-centers. He produced anemia of the nerve-centers by cutting off a portion of the blood-supply, by the partial or complete closure of bloodvessels leading to these centers. He compared the excitability of the nerve-centers before and after the artificial anemia, and in this way determined "the effect that partial anemia exercised on the nerve-centers." Dr. Aducco concludes his paper as follows:

"In conclusion, I must say that the researches I have just described have led me to draw the following conclusions: In anemia, that is to say, when the flow of the blood is diminished, the active substance of the nerve-centers is found in a state of great excitability. In this condition excitants from the exterior act much more energetically than in the normal condition. This state of excitability *increases* most probably during the entire duration of the anemia. It seems to me, also, that one ought to be able within certain limits to admit that there is an inverse relationship between nutrition and excitability of the nerve-elements; this latter augments all the time the nutrition diminishes."

From the statistical, clinical, and experimental evidence given in this paper, I think one is justified in the conclusion that tuberculous anemia plays a most important rôle in the production of chorea.

It is not the purpose of this paper to underrate the etiologic importance of rheumatism in producing chorea, for there is no fact better established in medicine than that about 25 per cent. of all cases of chorea are preceded by an attack of rheumatism. In the table presented 23 per cent. of the cases had rheumatism and 21 per cent. had organic heart-disease, and these figures are in close keeping with the figures established by a great many observers, but they only show what has been known for a long time, that rheumatism and organic heart-disease are important etiologic factors of chorea. But what I do wish to protest against is the apparently prevailing idea that rheumatism is the only cause of chorea worth searching for. Investigators, in their zeal to find in all cases of chorea a previous history of rheumatism, have overlooked other important causes, and have taken as evidence of rheumatism the most vague history of muscular pains in the past.

I hope, therefore, that the foregoing table will serve to call attention to the relationship of tuberculosis and other chronic anemia-producers to chorea. For it is my belief that rheumatism, tuberculosis, malaria, syphilis, scarlet fever, and possibly other zymotic diseases, produce chorea by acting on the nerve-centers through the blood, and that they may do this in two ways: first, directly by chemical poisons produced during the intercellular contest of cells and bacteria which occurs in all zymotic diseases; second, indirectly by malnutrition of the nerve-elements due to the impoverished state of the blood or feeble capillary circulation in these diseases.

In conclusion I offer the following rather ambitious attempt at an explanation of the relationship of the various etiologic factors in producing chorea.

First, and probably the most important of all the factors that produce chorea, are the influences that are classed as predisposing causes. These predisposing causes produce a hypersensitiveness in the ganglion cells and other nerve-elements of the central nervous system, and this sensitive, unstable condition of the nerve-elements is the great foundation-cause of chorea. Among the predisposing causes that act by developing or increasing this sensitive condition of the nerve-elements are the following:

First. *Heredity.* A neurotic family history is usually found.

Second. *Sex.* Females have more highly organized and sensitive nervous systems than males.

Third. *Age.* Chorea is more frequent during childhood because "the ganglion cells and other nerve-elements during this period of rapid metabolism are immature and unstable." (Dr. Couston.) And it is less frequent as the mechanism-inhibiting reflex phenomena become better and better developed.

Fourth. *Social condition,* when it results in impure

[1] Archives of Pediatrics, May, 1893.

[2] Transactions of the Tenth International Medical Congress, vol. ii, part 2, page 70.

air, poor food, and great nervous strain, may lower the tone of the nervous system.

The foregoing predisposing causes, which, for the most part, are beyond our control, are the chief factors in producing that instability of nerve-elements that makes it possible for chorea and other so-called neuroses to develop when the direct and exciting causes are favorable to their development.

The second great etiologic factor in the production of chorea is a malnutrition of the nerve-centers as a direct result of poisoned or impoverished blood. The hypersensitive nerve-centers are, as we have seen, readily made more sensitive and irritable by insufficient nourishment. Diseases, therefore, that produce chronic anemia, or any other blood-change that will interfere with the nourishment of the nerve-elements, will act as causes of chorea.

Among the causes that act in this manner are the following:

First. Tuberculosis, especially of the lymph-glands, is, as we have seen, a most important cause; over 50 per cent. of the cases of chorea occurring in dispensary practice have tuberculous anemia.

Second. Rheumatism is a most important and well-established factor, and occurs in 25 per cent. of all cases of chorea.

Third. Organic heart-disease, apart from rheumatism, is also an important factor, and may act by retarding the capillary circulation, and in that way influencing the nutrition of the nerve-centers.

Fourth. Malaria, scarlet fever, and other diseases that produce profound anemia, may act in the same way.

In attempting an explanation of the etiology of chorea I have, in the foregoing scheme, given first rank as an etiologic factor to the blood-state that results from certain zymotic diseases. This blood-state is, in my opinion, the real cause of the disease, and, what is more important to us as clinicians, is a cause that may readily be removed by treatment.

Last, and least of all in importance in producing chorea, are the so-called exciting causes that act only in precipitating the attack in children that have been prepared for this disease by heredity and malnutrition. Among the exciting causes are fright, grief, mental overwork, ocular defects, and genital irritation.

I am not presumptuous enough to believe that I have in this paper set forth the exact relationship of tuberculous anemia, rheumatism, etc., to chorea; but I have been induced rather to offer this explanation in the hope that we may all be benefited by the criticisms it provokes.

Sir Andrew Clark has been reëlected President of the Royal College of Physicians of London for his sixth term.

SYPHILIS, EPITHELIOMA, LUPUS VULGARIS, AND LUPUS ERYTHEMATOSUS.

Notes from Ten Years' Service (4131 cases) at the Philadelphia Dispensary for Skin Diseases.

BY HENRY W. STELWAGON, M.D.,
CLINICAL PROFESSOR OF DERMATOLOGY IN THE JEFFERSON MEDICAL COLLEGE; DERMATOLOGIST TO THE PHILADELPHIA HOSPITAL, ETC.

SYPHILIS.

THE cases of cutaneous syphilis numbered 280; of these 129 were in males and 151 in females. In this number are included 15 cases of hereditary infantile syphilis. Of the 265 cases of acquired syphilis, there were 132 representing the early or secondary eruptions, and 133 representing the late or localized disease. In these cases there were—

Between 15–20 years	23 cases.
" 20–30 "	98 "
" 30–40 "	79 "
" 40–50 "	48 "
Over 50 years	13 "
Age not recorded	4 "

Of the types of the early eruptions, 24 cases were macular, of which several were maculo-papular; 97 papular, of which 12 were papulo-squamous, 11 chiefly moist-papular, 4 miliary-papular, and 4 annular (all four in colored persons), 2 papulo-pustular, 10 pustular, of which 1 was miliary-pustular, 2 large-flat-pustular, and 2 decidedly rupial; and 1 generalized tubercular. In these early cases also are included 8 patients with chancre, in whom the eruption developed after they came under observation. Of these 8 cases of chancre, 3 were extra-genital—1 on the lip, 1 on the chin, and 1 on the cheek.

The length of time between exposure and the appearance of the early cutaneous outbreaks, so far as can be approximately stated, varied from seven weeks to a year. In two or three cases the disease was of the malignant variety, and these were among the pustular cases, but in no instance was a fatal ending recorded. In the great majority of the cases the disease was mild and rapidly responsive to treatment. Although the various vaunted remedies brought out from time to time were experimentally prescribed, such trials merely resulted in emphasizing the value of mercury as the specific remedy. Along with this drug were prescribed, according to indications, small doses of opium, ferruginous tonics, cod-liver oil, and other nutritives. The mercurial commonly prescribed was the protiodid or the gray powder.

Of the late syphilodermata the types were: In 54 cases tubercular non-ulcerating; in 51, tubercular ulcerating; in 8, gummatous; in 1, vegetating; in 19, ulcers having resulted probably from the tubercular or gummatous type, but whose early features had been lost. The site of the eruption in

these late cases were: Face, 43 cases; legs, 30 cases; arms, 16 cases; hands, 9 cases; trunk, 7 cases; scalp, 4 cases; neck, 3 cases; arms and legs, 2 cases; feet, 1 case; palms and soles, 1 case; two or more regions, 17 cases; and not recorded, 8 cases. In most of these cases the eruption appeared several or more years after the contraction of the disease, and, in so far as could be ascertained, more especially in those in whom early treatment had been neglected or had been of short duration.

In a number of patients ten years had elapsed since the chancre, and in one case twenty years. In most of the cases of the tubercular type, especially the non-ulcerating, the eruption was sluggish, the disease pursuing a slow and long continued course; in one instance the duration had been ten years. In most of the cases, too, there were no other discoverable symptoms, either in the present or immediate past. Excepting a few cases of the superficial tuberculo-pustular type, and commonly about the nose, the disease yielded rapidly to treatment. Locally, a weak mercury oleate ointment, or white precipitate or citrine oinment, was employed, and in obstinate and rebellious cases, a weakened mercurial plaster. In these cases the ordinary constitutional methods by potassium iodid and a mercurial, usually the biniodid or corrosive chlorid in small doses, were prescribed. In some cases a combination of the iodids—ammonium, potassium, and sodium—was found to be more efficient and better borne. The dose of the iodid in the average case scarcely exceeded ten grains three times daily, and in many cases five-grain doses were sufficient to bring about recovery. The mercurial was always prescribed, as the experience of this Dispensary has always been that the late syphilodermata so treated exhibited less tendency to recur than if potassium iodid alone had been given. In exceptional cases cod-liver oil and iron preparations were necessary before satisfactory response was made to the specific treatment.

EPITHELIOMA.

In all, 27 cases came under treatment, 10 males and 17 females. Excepting one case, all were of the superficial type. Of these patients, only 7 were under the age of fifty; between fifty and sixty there were 7 cases, and over sixty there were 13 cases. The youngest patient was aged thirty-five, and presented a small lesion of six months' duration over the left eyelid. The duration was noted in only 11 cases, and in these it varied from six months to ten years. As to the site of the disease, in 12 cases it was the nose, either upon the ala, side, or bridge; in 4, under the right eyelid; in 1, under the left eyelid; in 3, on the cheek; in 2, close to the ear; in 1, on the ear; in 2, on the forehead; in 1, on the left side of the vulva; and in 1, on the back of the hand.

The treatment selected depended upon the size and location of the lesion, and to some extent upon the patient's inclinations. It consisted in the use of a plaster of resorcin or pyrogallic acid, two drams to the ounce, applied continuously for from one to several weeks; in the use of an arsenical paste made up of one part of arsenious acid to two or more parts of acacia, and sufficient water; in excision; in curetting, followed by cauterization with caustic potash, or a few days' use of the pyrogallic acid plaster. The surest results as regards permanence may, upon the whole, be said to have followed the methods of treatment by arsenical paste, and by excision.

LUPUS VULGARIS.

Tuberculous infection of the integument was seen in 16 instances, in 6 males and 10 females. Of these cases, 11 represented the clinical type usually designated lupus; 3 cases, the clinical type commonly known as scrofuloderma, the disease having had its beginning in a breaking down of one or several of the lymphatic glands; and in 2 cases the so-called small papulo-pustular scrofuloderm described by Duhring some years ago was presented. Three of the patients were of foreign birth. In 6 of the lupus cases the disease had appeared before the tenth year, and in 1, as early as the second year of life; in only 3 instances did the disease appear after the age of twenty-five. The previous duration varied, in the 16 cases, from six months (scrofuloderma) to ten or more years. The disease was, as a rule, slight in extent, and in all instances, except 4, limited to the face or contiguous part; even in the 2 cases of superficial scrofulous ulceration beginning in the cervical glands, the disease had encroached slightly on to the face. One case especially deserving of note here involved the tip, right ala, and side of the nose, appearing as a mushroom-like ulceration.[1] The most extensive case was in a boy of fifteen, the disease, of years' duration, presenting several large areas on the face, leg, and arm, spreading peripherally like a syphilide.

The treatment consisted variously of the continuous application of pyrogallic acid plaster, of from 20 to 25 per cent. strength; arsenical paste; curetting, supplemented either with a momentary cauterization with caustic potash, or several days' use of pyrogallic acid plaster; and excision. In these cases, as in all lupus cases, the disease exhibited a strong disposition to recurrence. The constitutional treatment, was based on indications; in many cases it was not prescribed at all, while in a number

[1] This case is reported in full in the Journal of Cutaneous and Genito-urinary Diseases for November, 1892.

cod-liver oil was advised, with, in a few instances, decided benefit.

LUPUS ERYTHEMATOSUS.

This disease was not common, although more so than lupus vulgaris. Nineteen cases, or a proportion of less than one-half of 1 per cent., were observed; females largely predominated, this sex being represented by 15 cases. Eight of the 19 cases were of foreign birth, 5 of Irish, 2 of Scotch, and 1 of German. With the exception of a few cases, which presented a diseased area covering the nose and extending partly over the cheeks, the eruption was slight in extent and of a mild superficial type, consisting of two or three dime to quarter-dollar-sized patches. The previous duration varied from a few months to four years. The youngest patient was a woman aged twenty-one, and from this age up to thirty the largest number, 9 cases, were met with; the oldest patient was aged sixty-six. The nose was the site of the disease in 5 cases; the cheek, in 5 cases; the nose and cheeks, in 3 cases; in the remaining cases there were two or more small scattered patches over different parts of face. The eruption was not seen outside of the face-limit, except in one case, which, in addition to a patch upon the chin, presented a patch upon the scalp also. Nothing was learned as to etiology.

The main treatment was external, although in a few cases advantage seemed derived from the administration of cod-liver oil, and from phosphorus. The most valuable external applications were: A lotion of a dram each of zinc sulfate and potassium sulfid to four ounces of water; sulfur ointments; tarry ointments and oils; salicylic acid ointments; ichthyol ointments and lotions, of from 5 to 50 per cent. strength; resorcin lotions, of from five to sixty grains to the ounce; pure carbolic acid; and painting with a collodion solution of pyrogallic acid, of from ten to sixty grains to the ounce; and finally, in suitable cases, linear scarification, and the curette.

THE PROPHYLAXIS OF SCARLET FEVER.

By E. P. HERSHEY, M.D.,
of Denver, Colorado.

It has become a recognized fact that little or nothing can be done in the way of medical treatment that will either abort or mitigate the severity of scarlet fever. All that the physician is able to do, as in the other exanthemata, is to control symptoms. There is no question, at this date, as to the importance of antiseptically treating the throat even in the lightest cases, and that this is the only thing in our power to prevent serious invasion of the disease. As the sequelæ are always in proportion to the severity of the attack, we are prompted to control to the best of our ability all febrile symptoms of a severe type.

The one dangerous after-effect of scarlet fever—nephritis—leads us to administer throughout the whole affection such remedies, principally digitalis, as may have a diuretic effect. The danger of heart-complication can also be guarded against by the timely and continued use of ammonium carbonate. These two remedies are admitted to be the safest and most valuable in the treatment of this disease, as far as systemic effects are concerned, but these are necessary only in proportion to the amount of absorption that takes place through the glands of the throat, from the putrid matter that forms about them. Observation upon this point has brought to light the fact that whenever the throat-symptoms have been of particular severity, the case has always been a grave one; and it may be said that if there has been error in the treatment of scarlet fever, it may usually be found in laxity of attention in keeping the throat clean. Cases do much better on the half-hour application than they do by following the usual direction, to "clean the throat every two or three hours." But, with all this, we lose a certain per cent. of our cases in proportion to the severity of the epidemic.

The disease being preëminently a contagious one, it is to this point that our efforts should be concentrated as a sure means of controlling the disease. Scarlet fever could be effectually stamped out were we able to destroy the contagion. That, in a very small proportion of cases, this is done, there is no doubt. It is a well-known fact that the products of desquamation are decidedly contagious for a long period after all symptoms of the disease have disappeared. It may be truly said that one susceptible to the disease may take it from one who has recovered at as late a period as ninety days after desquamation first set in.

During the past three years, in an effort to ascertain the origin of contagion in the cases that have come under my notice, it was learned that at least 70 per cent. of all cases were either supposed due or were directly traced to contact with other children at school. As to the remaining 30 per cent., the source was either unknown, or else was ascribed to direct exposure. It seems as though all possible care is taken in every case of this affection to prevent contagion during an attack, and that after the patient has been pronounced well the Board of Health thoroughly fumigates the house in which the case existed. It is true, too, that all physicians, recognizing the contagiousness of the desquamation, use the best means in their power to keep the body disinfected—the most prevalent remedy for this purpose being carbolated vaselin, which has proved itself an insufficient means to combat the infection.

For a considerable time, knowing the antiseptic value of hydro naphthol—which is equivalent to that of one-fifth of the same quantity of corrosive sublimate, and the latter remedy, if used for any length of time, having a tendency to produce ptyalism, a 5 per cent. hydro-naphthol soap suggested itself. Daily washing with this has, without doubt, given the following two results, viz.: desquamation has been hastened, and contagion prevented. Until assurance had been established as to the efficacy of this after-treatment, a certain amount of care was taken to prevent other members of the family from coming into contact with the convalescent. A number of cases since then have been permitted to mingle with other children during desquamation, as long as the soap was used, and a single case has yet to be noted in which such exposure has led to the development of the disease.

The use of such an antiseptic soap insures, first, the absolute contact of the medicament, on account of the rubbing; second, the washing away, and at the same time the disinfection of the loose particles; third, that the surface is left clean.

In the early days of desquamation two or three washings daily should be required. After a period of one week daily washings suffice. This should be continued for ten days longer, at which time all signs of desquamation have disappeared, if this treatment has been adhered to.

Were this method of the after-treatment of scarlet fever to be carried out by others, and found in their hands to be as successful as this report shows, then we shall have gained a great deal in the prevention of the spread of that affection, which gives a greater mortality among children than any other disease. It is with this in view that I recommend its use by others, that any failure in its efficacy may be reported.

CLINICAL MEMORANDA.

A CASE OF MOVABLE OR FLOATING LIVER.

BY GEORGE NOBLE KREIDER, A.B., M.D.,
SURGEON TO ST. JOHN'S HOSPITAL, SPRINGFIELD, ILL.

PROFESSOR STRÜMPELL, in his admirable text-book on the *Practice of Medicine*, in speaking of wandering or movable liver, says: "It is of very rare occurrence, and has been seen thus far only in women." The usual cause of this lesion, and the reason for its appearance in the female, is the tight lacing to which the weaker sex subjects itself. An instance of this abnormality in a man, which I am about to describe, is probably the first to be put on record, and will therefore be of some interest to the profession.

Captain H. B., of Havana, Ill., a veteran of the war of the Rebellion, was brought to my office by his family physician, Dr. P. L. Dieffenbacher, March 17, 1893. An examination was undertaken, and a diagnosis of floating liver was made. On account of the great rarity of the lesion, and to be more certain of its presence, I requested his return in two weeks, when in the presence of Drs. Ryan and Matheny, of Springfield, I made a more thorough examination. The previous diagnosis was confirmed by these gentlemen. The patient was sixty-two years of age, five feet eight inches high, and weighed 180 pounds. His father had died at sixty-eight, from gout, and his mother at forty-eight, from cholera. He had formerly drunk to excess, periodically, but for the preceding eighteen years he had not tasted intoxicants. He had had gonorrhea, and herpes or soft chancre, or both, a number of times, and his attending physician stated that he had had specific disease, of which, however, there was no evidence at the time. The man thought that his liver was loosened by violent muscular exercise some years before, when he had been obliged to lift heavy casks of liquor. He had first noticed a lump in his right side about a year previously, but had paid no attention to it, because he had thought it "natural," and it gave him no pain. When it got larger he became alarmed, and consulted Dr. Dieffenbacher. He had never had any headache or dizziness, no cough, pain in the chest, palpitation of the heart, or shortness of breath. He had never had pains in the abdomen, or nausea, or vomiting. His appetite was excellent, his bowels regular. There was no weakness or pain in the extremities. He slept well, and did not rise at night to urinate. His urine was normal, his pulse 72, his temperature 98.8°. He was fleshy and well-nourished, and appeared several years younger than he really was. The skin was clear. In fine, the man declared himself absolutely well, as far as he knew.

The patient was slightly bald, and somewhat deaf, but not more so than is usual at his age. There were no scars on his head. Vision was excellent, and there were no scars on the cornea, and no adhesions of the iris. The teeth were well preserved, the tongue was not coated. The naso-pharynx was in a healthy condition, and free from scars. The heart, lungs, and pleura were normal. There were no enlarged veins on the abdomen. The spleen was normal, and the left side of the abdomen was flaccid. In the erect posture a large tumor was evident on the right side, which became much more distinct in the reclining position. The upper and anterior surfaces of the tumor were apparently spherical and smooth; the lower edge could be plainly felt, and a notch corresponding to the separation between the right and left lobes could be easily made out. On percussion, the hepatic percussion-dulness began four and three-quarters inches below the right nipple in the nipple line, and extended downward toward the ilium seven inches. It also extended from the umbilicus eleven inches to the right. The tumor (liver) moved slightly when the man turned. It could be moved about without the least pain, and by lowering the head and elevating the hips, it could be pushed toward its normal place, but it could not be replaced entirely, even after some minutes had been spent in the effort.

The patient declared that he suffered absolutely no inconvenience from his floating organ, and when he was satisfied that it was not malignant, he seemed perfectly happy.

Strümpell says that there are usually some discom-

fort, pain, and digestive disturbances. I recommended the application of a retentive bandage.

The points of interest in the case are: The derangement is not congenital; it occurs in a man; it was apparently caused by muscular effort; it was not caused, and is not accompanied by any disease of the lungs, pleura, heart, pericardium, peritoneum, mesentery, kidneys, or stomach. The relaxation of the suspensory ligament has caused a partial revolution of the organ, so that the diaphragmatic surface of the organ is turned toward the anterior abdominal wall. This fact explains the large vertical measurement of the organ as it lies. Finally, the most remarkable fact is that which I have mentioned several times—that he suffers no inconvenience from his wandering organ.

PRENATAL CLOSURE OF THE PULMONARY ARTERY.

BY A. J. BURGESS, M.D.,
OF MILWAUKEE, WIS.

AFTER a normal labor at term, a male child was born. The child was of good size, and presented no external abnormality. The child's face made the contortions of one crying, but no sound was uttered. A full hour was spent in trying to restore the child. After the lungs had been inflated several times by artificial means, the heart beat vigorously, but upon ceasing the inflation the heart-beat gradually became slower and weaker. After each inflation during an hour, the heart-beat underwent the same modification, and efforts on the part of the child at crying and breathing were made with only one result, viz., the drawing inward of the lower border of the chest by the action of the diaphragm. Powerful inflations did not seem to expand the chest. The hand felt a churning sensation over the lower chest in front during systole. The child was considered non-viable, and soon died after inflation ceased.

At the autopsy, the costal pleura was found to be adherent to an underlying membrane, about as firmly as two pieces of wet newspaper adhere. The underlying membrane proved to be the pericardium, of which the cavity was largely distended, filling the whole chest. The lungs were not visible from the front. The entire contents of the chest were removed *en masse*. The lungs lay collapsed behind a fluctuating mass that proved to be the heart, the right side of which was enormously distended with blood. The right auricle and ventricle held blood estimated to be at least three ounces.

The right auricle and ventricle were both dilated, and the walls of both excentrically hypertrophied. The right auriculo-ventricular opening was dilated largely enough to admit the tips of the index and middle fingers. The tricuspid valve formed a fringe around this opening, and was covered with a papillary growth. The valve was entirely incompetent. There was absolutely no opening from the right ventricle into the pulmonary artery. The occlusion was musculo-membranous. The segments of the pulmonary valves had apparently become adherent to one another and overlaid, on the ventricular side, by a muscular band. From above, the pulmonary artery was open to the valvular surface, and was probably somewhat contracted in caliber. The papillary fringe on the right auriculo-ventricular valves may or may not have been the remains of a morbid process which closed the pulmonary orifice.

The foramen ovale admitted a large forefinger easily. The left auricle was dilated, but not largely so, and its walls were hypertrophied. The left auriculo-ventricular opening was not far from normal in caliber, and the mitral valve was normal. The left ventricle was dilated and hypertrophied to a moderate extent. The ductus arteriosus Botalli was in the usual situation, but had a caliber larger than usual. The aorta and its valves were normal. There was no defect of the interventricular septum. There was no congenital defect of the interauricular septum, the large foramen ovale being due to the enormous dilatation of the right auricle, and to the fact that it served its own function, plus that of the pulmonary orifice, which had closed. It is probable that the course of events was as follows: At a time late in fetal life, subsequent to the completion of the ventricular and other septa, a morbid process closed the pulmonary orifice of the right ventricle; the right ventricle, its auricular opening, its auricle, the foramen ovale, the left auricle, its ventricular opening, and the left ventricle, became successively dilated; the walls of the several cavities became hypertrophied; and the caliber of the ductus arteriosus became widened.

The reason why this child could not breathe, was that the enormously distended right auricle and ventricle so completely filled the chest—even distending it—that the lungs, collapsed behind the heart, were incapable of inflation by the force at the disposal of the child. The heart was practically a neoplasm distending the chest and compressing its contents.

It seems possible that, had the pulmonary closure taken place earlier, the various compensatory arrangements might have become complete enough to have permitted a longer extra-uterine existence.

In *Pepper's System of Medicine*, vol. iii, page 695, the following statement is made: "If the pulmonary artery is obliterated or exceedingly narrowed at a later period (*i. e.* subsequent to completion of the ventricular septum in the third fetal month), the ventricle shrivels, because no blood is able to pass, and gradually more and more of the fetal current passes through the foramen ovale to the left side." The present case is satisfactory proof that it is not true that the right ventricle always shrivels under the circumstances noted. In this case the pulmonary closure was complete; the ventricular septum was complete; the right ventricle was dilated and hypertrophied. Aside from the condition of the ventricular septum, there is another factor not considered in the quotation made, and that is, the condition of the tricuspid valve and its orifice. In this specimen the tricuspid orifice was dilated, its valve diseased and incompetent, if not entirely functionless. The right auricle and ventricle thus formed practically one cavity, viz., an auricle. The right ventricle functionated in the direction of the right auricle, because no valves opposed it at the tricuspid orifice; and because it *could* functionate it *did not atrophy*.

No. 1102 GRAND AVE.

A State Ice-Commission.—A bill is pending in New York providing for a State Ice-Commission, making it a misdemeanor to cut or sell unclean or impure ice. We are a long time reaching such matters!

MEDICAL PROGRESS.

Myxedema following Bronchocele Cured by Thyroid Therapy.—ANDERSON (*The Journal of Laryngology, etc.*, 1893, vii, 2, p. 68) has reported the case of a woman, thirty-two years old, with typical symptoms of myxedema: the skin was dry; the hair was falling out; perspiration was wanting; feet and hands were swollen; there was great languor and want of energy, and then complaint of cold; speech was not affected; the disposition was unaltered; the appetite was poor; constipation was troublesome; memory was impaired; menstruation was regular. During childhood the woman had had a unilateral bronchocele, which disappeared under treatment with tincture of iodin. The mother had had a similar swelling of the throat, but never myxedema. Twenty minims of a specially prepared thyroid juice were injected subcutaneously, at first every third day, then every second day, and then daily. Afterward fried thyroid gland was administered, the injections being continued on alternate days. In all, fifteen injections were made and three glands were eaten in the course of thirty-six days. The patient was at the same time taking a mixture of arsenic and iron three times a day. Improvement set in at once and was marked and progressive.

The Etiology of Emphysematous Phlegmons.—In four cases of cellulitis attended with the formation of gas, FRAENKEL (*Centralbl. f. Bakteriol. u. Parasitenk.*, xiii, 1, p. 13) has succeeded in isolating a hitherto undescribed bacillus, to which he attributes the property of gas-production. The organism is distinct from that of malignant edema and that of "Rauschbrand," but in morphologic appearance is not unlike the bacillus of anthrax. In three of the cases pyogenic cocci were also present. The gas-generating bacillus grew with especial rapidity upon glycerin-agar containing sodium formate, giving rise to an abundant formation of gas having the disagreeable odor of hydrogen sulphid and volatile fatty acids. The organism also gave rise to the formation of gas, but without odor, in agar containing glucose. It grew well in bouillon containing sodium formate or grape-sugar. There was no formation of gas in ordinary gelatin. Spores were not found. The organism could be stained with the ordinary anilin colors, and especially by the methods of Loeffler and Gram-Weigert. Inoculation of guinea-pigs was followed by the occurrence of inflammation with gas-formation. Characteristic bacilli were found in the lesions. One attack failed to protect from subsequent infection.

Glaucoma in Young Persons.—STORY (*Ophthalmic Review*, xii, 137, p. 69) has reported five cases of glaucoma in persons less than thirty-six years of age. The first was in a girl of thirteen, in which the affection developed acutely following the sub-conjunctival injection of two minims of a 3 per cent. solution of cocaine for the purpose of dividing the tendon of the right internal rectus muscle. The attack was relieved by treatment with eserine. Some time later a similar sequence of events followed in the case of the left eye, although the solution of cocaine was instilled, and with it simultaneously two minims of a solution of eserine. The second case was in a woman of eighteen, in which the glaucoma was possibly dependent upon a primary chronic inflammatory process. In the third case, in a woman of thirty-five, glaucoma set in acutely in the left eye, possibly in connection with an intra-ocular tumor. The fourth case was in a man of thirty, in which the process was a chronic inflammatory one, and whose mother had bilateral glaucoma. The fifth case was in a man of thirty-four, in which the lesion was dependent upon a chronic inflammatory process.

Bilateral Polyneuritis following Pneumonia.—KRAFFT-EBING (*Prager medicin. Wochenschr.*, xxiii, 3, p. 26) has reported the case of a farmer, thirty-eight years old, without a history of syphilis or alcoholism, who, following an attack of pneumonia, suddenly lost power in both upper extremities; there was anesthesia down to the elbows, hyperesthesia to the fingers. The paralysis persisted, but the anesthesia disappeared in the course of twelve days. There had also been transitory dyspnea, dysphagia, and impairment of hearing, together with lancinating pains at the nape of the neck, on the back, and in the distribution of the ulnar nerve. There was progressive wasting of the muscles about the shoulder, with degenerative electric reactions and fibrillary muscular contractions. The reflexes and the electric irritability were enfeebled. Subacute anterior poliomyelitis was excluded by the relatively favorable course of the symptoms and by the absence of vasomotor disturbances.

A Vesical Calculus enclosing a Portion of the Bladder-wall.—At a meeting of the Medical Society of Hamburg, SICK (*Deutsche medicin. Wochenschr.*, 1892, No. 51, p. 1171) presented a calculus obtained by supra-pubic section from a man, fifty years old, who for several years had complained of increased frequency of micturition, occasional interruption of the stream and offensive odor of the urine, and who died subsequently in consequence of bilateral pyelonephritis. The calculus was a phosphatic one, and on section presented three layers, the inner and outer of which were in one place connected by a bridge of deposit. The middle layer was made up of organic matter, which upon microscopic examination was found to consist of remains of bloodvessels, connective tissue, and cell-detritus, together with a large number of streptococci. In explanation of the formation, it is suggested that a phosphatic calculus by accretion was made to enclose a fold of the mucous membrane of the bladder, which subsequently became necrotic and was detached.

Protective Substances in the Blood of Convalescents from Diphtheria.—KLEMENSIEWICZ and ESCHERICH (*Centralbl. f. Bakteriologie und Parasitenkunde*, xiii, 5, 6, p. 153) have succeeded in conferring upon animals a relative degree of immunity to diphtheria by means of previous treatment with defibrinated blood or with blood-serum obtained from convalescents from diphtheria. A similar protective influence could not be conferred by means of the blood of healthy persons that had not had diphtheria. As the immunity was not permanent, the opinion is expressed that it was dependent upon the presence of an antitoxin, of which the good effects were exerted until the supply was exhausted.

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SATURDAY, APRIL 22, 1893.

THE SANCTITY OF THE CONFIDENCE REPOSED BY PATIENTS IN PHYSICIANS.

AT a recent meeting of the Philadelphia County Medical Society, a most interesting discussion took place upon the medico-legal aspects of criminal abortion. It was pointed out that the mere attempt to commit a criminal abortion constituted the offence (a felony), and that, while the outcome in nowise altered the degree of the crime, it determined the measure of punishment to be meted out to the transgressors.

The most important, and perhaps the most startling, point that was brought out was the dictum, as laid down by the learned and distinguished District Attorney of the City of Philadelphia, and whose position seemed entirely legitimate and logical, that if it come to the knowledge of a physician in his professional capacity, that a criminal abortion has been attempted or committed—*i. e.*, a felony has been committed—it is obligatory upon him to apprise the office of the District Attorney of the facts, with which office then rests the responsibility and the discretion as to what further action shall be taken. In case of death, the facts are to be reported to the office of the Coroner.

It was further maintained that if under the conditions named the physician fail to make report, he renders himself liable to prosecution for misprision of felony. So, too, if a physician be called upon to testify in court in the trial of a case of criminal abortion, he is accorded no immunity in the State of Pennsylvania, and in other States as well, from the necessity of divulging the confidences that have been reposed in him by patients who intrust him with even more than their liberty—that is, their lives. By the mandate of the law he is compelled to answer. True, he may refuse to speak, but he is then exposed to the liability of punishment for contempt of court. The lawyer, for good and obvious reasons, is, under like circumstances, permitted to withhold information confided to him by his client—nay, it would be treachery to divulge such information. The Code of Ethics of the American Medical Association imposes upon the physician this obligation of confidence, but the law does not recognize the Code.

By analogy, too, we can believe that in the trial of a case of murder the physician would be compelled to divulge whatever information he might be possessed of, confided to him though it might be by one who at the same time places his life in the practitioner's hands, while his favored brother, the lawyer, is permitted, also by decree of the law, to withhold, with the utmost sanctity, the information that has been intrusted to him, in a relation in which life may not at all be concerned. The injustice must be self-evident, and the medical profession is justified in demanding (the word is chosen advisedly) the same protection for its members as is accorded their professional brethren, the lawyers.

It is scarcely necessary to say that there is probably no more law-abiding constituent of the community, none that is more self-sacrificing, none that does a greater work of the truest philanthropy and the purest charity than the medical profession. If it be charged that the matter is one of sentiment, we can but reply that the sentiment is the noblest of which man is capable, being even higher than that which permits the lawyer to seal his lips as to the confessions of his client, who comes to him with the knowledge that all the facts must be stated.

Must a stricken human being be compelled to forego medical attention because the law holds over him the threat that the information which he must needs give his medical adviser is to become the possession not alone of him who is called perchance to save life, but of the court and prosecuting attorney as well? Is an unfortunate woman to be permitted

to die because she will not divulge to the medical attendant, who must be called to save life, that which she knows will bring shame not only upon herself, but (what is perhaps more to her) upon her family as well, because that medical attendant is not by the decree of the law permitted to hold sacred the confidence that must be reposed in him? No true man can answer in the negative. No, it is more than a matter of sentiment. It is a matter of justice and of right. To say the least, to the physician it is a matter of equality, and there should be none more ready than the legal fraternity to acknowledge the righteousness of our position, and to extend its hand in support of measures that will accord the physician a privilege, yea, a right, to which he, more than any other, not excepting the clergy, is entitled, and that will place him upon the same plane as the lawyer, with regard to information that comes into his possession from clients who intrust him with their confidence and their person.

We hope that the influential medical organizations of our city and State will take steps to have inscribed upon the statute books such decrees as will confer upon medical men the privilege of holding sacred the confidences that come to them unsought in their professional capacity.

THE CHOLERA.

IN view of the likely recrudescence of cholera with the advent of warm weather, it is well, in advance, to calmly look over the ground, and, profiting by the lessons of the past, and particularly of the recent past, strengthen the weak points in our prophylactic and therapeutic armament. Our familiarity with cholera is, fortunately, a remote one, and the changes that have taken place in the departments of hygiene and therapeutics render unavailable the results of experience gained in previous visitations to this country.

The history of the epidemic at Hamburg during last year has been pretty fully written, but there are some obscure points yet to be cleared up, and certain differences of opinion remain to be harmonized. PROFESSOR HUEPPE,[1] of the University of Prague, and a distinguished hygienist, has made an elaborate and noteworthy contribution to the subject. He points out that both those who maintain that the sole etiologic factor in the development of cholera is the comma-bacillus, and those who attach the greatest importance to local and prevailing conditions, go to extremes in the support of their respective views.

The true position is, as usual, the middle one. To both of the influences named, and to the personal predisposition as well, due importance is to be attached. There is practically no dissent from the proposition that there can be no cholera without comma-bacilli, but it must be equally obvious that the introduction of the bacilli into the human organism does not necessarily give rise to cholera; and that concomitant conditions play some part in the spread of epidemics will not be denied by any fair mind. Granting, then, a due share of importance to all the influences that enter into the etiology of cholera, we have a substantial basis upon which to establish measures of prophylaxis and management.

To prevent the introduction of comma-bacilli into the human organism is to prevent the development of cholera. This is to be accomplished by *isolation* of the sick, and *disinfection* of their excreta and of everything that comes in contact with them. The bodies of those dead of cholera should preferably be incinerated, or they may be wrapped in sheets saturated with a solution of mercuric chlorid, or better, carbolic acid, and be inhumated in the usual manner.

We have intentionally refrained from speaking of quarantine, because we do not feel sure that it is essential; for it has been demonstrated that if, in conjunction with a system of rigid inspection, the other measures mentioned are faithfully carried out, quarantine becomes unnecessary.

The most scrupulous attention must be given to the water-supply, that it be protected from contamination in the first place and that it be subjected to some one of the accepted methods of purification in the second place. To make assurance doubly sure, only boiled water should be drunk and used for domestic and personal purposes, as only cooked food should be eaten.

The local factors, in so far as they are within control, should, by the most scrupulous cleanliness, be rendered such as to render the conditions most unfavorable for the existence and the spread of disease.

The individual predisposition should be reduced to the minimum by careful living, the avoidance of excesses and fatigue, the securing of sufficient rest and sleep, the observance of care in diet, the wear-

[1] Berliner klinische Wochenschrift, 1893, Nos. 4, 5, 6, and 7.

ing of suitable clothing, the avoidance of exposure to noxious emanations and to unfavorable meteorologic conditions—in fact, all of those precautions should be observed that enter into a rigid personal hygiene.

We must realize that we are threatened with an invasion of cholera. While there is occasion for genuine concern, needless alarm is to be avoided. The time is one for calmness and self-control, not for panic and loss of judgment. Cholera is not a contagious disease, according to the accepted use of that qualification. The danger is small if the proper precautionary measures be adopted. The community and the individual will each and both be responsible should cholera become epidemic, for it is within their power—as it is their duty—to prevent such an occurrence.

THE WATER-SUPPLY OF PHILADELPHIA.

UNIVERSAL suffrage has its drawbacks as well as its advantages. The executive and the judiciary officers of Government may be men beyond reproach, but the legislative branch is sure in time to come to represent the average popular standard of education, intelligence, and morals; and, under existing social conditions that force so large a proportion of the population of large cities into poverty and degradation, and threaten with submersion even those who are above the lowest and the lower depths, that "average standard" cannot be high. The result is that in "City Councils," or "Boards of Aldermen," as well as in State "Legislatures" and "Assemblies," considerations of the common weal often become secondary to those of individual wealth. Every public movement is hampered by the endeavor of individuals to turn it into a source of private gain; and in sanitary matters, which more directly concern THE MEDICAL NEWS, these attempts have often resulted in partial or complete perversion, or absolute prevention of important reforms. This has been especially marked in relation to the various projects for improving the water-supply of Philadelphia. In more than one instance, it will be remembered, the courts have had to be invoked to protect the public interests; and despite the full information that has from time to time been gathered by special commissions, sanitary experts, and the heads of city departments, and despite the persevering and intelligent efforts of more than one Mayor—the determination of persons and corporations with "political pull" that the public desire for pure water shall be made to pour a golden stream into their own coffers has hitherto succeeded in preventing the adoption of wisely considered or adequate measures.

In a recent paper (reprinted from the *Proceedings of the Engineers' Club of Philadelphia* (vol. x, No. 1, January, 1893), DR. HENRY LEFFMANN strongly advocates the erection of a proper plant for storage and filtration of Schuylkill water; believing that for the present, at least, this is of paramount importance. The suggestion is not new, but DR. LEFFMANN points out certain advantages not generally recognized, that would follow a mere increase of storage-capacity to, say, thirty days' supply under moderate demands.

1. It would enable pumping to be discontinued at times when the river is in unsatisfactory condition; a much smaller quantity of subsiding-material would be introduced into the basins; and danger from drought would be diminished.

2. Experimental evidence shows that the wholesomeness of water is improved by storage in large reservoirs—partly from subsidence, but largely from changes in the organic life present. Even pathogenetic organisms may be destroyed by such methods.

3. Even should the source of supply be changed hereafter, the reservoirs would be necessary, in order that the city should have adequate supply of water within its borders, to provide against emergency arising from drought, accident, war, or insurrection.

The simplest method of purification is sand-filtration. In the absence of facilities therefor, DR. LEFFMANN would prefer pressure-filters, employing coagulants such as alum. "With proper supervision as to the quantity of coagulant used, and with abundant storage-capacity, ... it seems to be possible to furnish the citizens of Philadelphia, at all times, with an abundant amount of perfectly clear water, suitable for all purposes, even when taken from the Schuylkill or Delaware within city limits."

We desire to urge upon the medical societies of Philadelphia, and upon individual physicians, that they make a vigorous, united, determined, and persistent effort to arouse public sentiment to a pitch that shall force City Councils to appropriate the sums necessary to provide the city with abundant storage-capacity, and with

adequate filtration-facilities; and that they insist that this shall take precedence of any question as to source of supply. If our source can be bettered hereafter, well and good; for the present let us make our present source yield us pure water. This can be done, if we persist in sending all selfish schemers to the background; and if we waive, for the present, honest differences of opinion on other points.

EDITORIAL COMMENTS.

The Journal and the Devotees of "Orificial Surgery."—Doubtless our readers, like ourselves, on first seeing this strange term, supposed that it related to a special application of surgical methods to the orifices of the body, and wondered what peculiarities justified such a specialty. One is, however, surprised to learn that it is another of the prolific and inexhaustible brood of nonsensical seriocomic delusions or illusions which seem to spring so naturally from American medical soil. It has a decided mystical and irrational flavor, due, doubtless, to the fact that it is an evident child of homeopathy. One "E. H. Pratt, M.D., LL.D., Prof. of Orif. Surgery" in the Chicago Homeopathic Medical College, a sort of high-priest of the cult, contributes to the organ of the fad a series of articles upon "Orificial Philosophy," in which he summarizes his own work and the philosophy of the Orificialists as follows: "All chronic cases will be found to present some form of orificial irritation sufficient to explain the lowered vitality, etc.; . . . in all forms of chronic diseases, therefore, from functional derangements to the deeper forms of pathology, the lower openings of the body will present abnormal conditions which involve the waste of sympathetic nerve force, and which are, therefore, responsible, etc. . . . Orificial irritation is the predisposing cause of chronic diseases generally."

What fathomless depths either of trickery or dunderheadism does not this *niaiserie* disclose! Every chronic disease of the brain, of the special senses, of the thorax, or of the abdominal cavity due to anal irritation! It is at first disgustingly funny, but, on second thought, it is infinitely serious and frightful to think of the human mind splashing about in such intellectual dish-water. What is sanity, then? one asks. These men are "Profs." and "LL.D.'s"; they publish a bulky monthly journal devoted to this literally *asinine* philosophy, and their medical sect is the "New School," the pet of fashionable folk and the controller of medical legislation. Civilization seems yet a good way off.

Milk-Legislation.—The acme of impudence and cupidity is displayed by the milk-dealers of Philadelphia in their opposition to the Boyer bill, introduced into the House at Harrisburg at the request of the Director of Public Safety of Philadelphia and the Philadelphia Board of Health. Dr. Shakespeare exposes the hypocrisy of the milk-dealers with deserved vigor and denunciation. The dealers say that the passage of the bill would drive them out of business, although milk is still handled in Pittsburg, where the law is operative. They say that the law is a dead letter, because it could not be enforced, which is untrue. They say that the legal standard for the purity of milk is impossible except for Jersey and Guernsey cows. This also is a falsehood. They say, lastly, that the standard for skimmed milk is too high, and Dr. Shakespeare exposes this fourth lie by showing that the milk-dealers are selling "separator-slop," an utterly valueless product of the creameries, for old-fashioned skimmed milk. They naturally wish to continue all this nefarious business, and physicians and good citizens naturally do not wish the people to pay for a fraudulent and diluted article of food at the price of the honest and pure article; while babies are starved by the thousand and disease is invited by the trade, which is really a trade in human life and health. Everyone should use his best endeavor to help on the passage of the Boyer bill.

Water-supply and Typhoid Fever.—From Dr. Leffmann's paper, elsewhere referred to, we extract the following table, showing the great diminution of mortality from typhoid fever in that district of Philadelphia east of Sixth Street and north of Poplar Street, resulting from the abandonment of the Kensington Water-works, and the substitution, in the latter part of 1889, of the Schuylkill for the Delaware as a source of supply of potable water to that district:

	Entire City.	Fifteenth Ward.	Kensington District.
1884	662	25	160
1885	610	19	161
1886	618	19	153
1887	621	20	181
1888	785	31	211
1889	736	42	126
1890	666	45	53
1891	683	52	57

The figures for the entire city and for the Fifteenth Ward, selected because it is a large ward and mostly in good sanitary state, show that the marked decrease in Kensington is not due to any general abatement in the disease. The increase in the Fifteenth Ward is probably due to increase of population.

The Practice of Medicine in Connecticut.—The following letter is quoted as emanating from the Secretary of the State Board of Health of Connecticut, in reply to an inquiry from an applicant:

"SIR: Anybody can practise medicine in Connecticut. You do not need to register; you do not need a medical diploma; you do not need to know the difference between opium and peppermint—you do not, indeed, need to know anything. You can simply come and live here and begin to practise. The laws of Connecticut will sustain you in collecting your fees for professional services, if you render any which you choose to call such. But if you undertake to carry me or my trunk to the depot for pay, you must get a license. If you peddle matches or peanuts, you must get a license. If you collect the swill from your neighbors, to feed your pigs, you must get a license. If you want to empty your cesspool, you must get a license. But you can practise medicine in Connecticut *without a license*."

The Orchiococcus is the name devised for an organism upon which the orchitis or epididymitis associated with

gonorrhea is supposed to depend. It is described as a diplococcus, a little larger than the gonococcus, from which it differs by being readily cultivable upon peptone, peptonized gelatin, ordinary bouillon, and alkaline solutions of casein and nuclein. The orchiococcus is frequently found in the gonorrheal discharge during the first five days. In its absence, it is said, orchitis does not develop. The organism does not affect the conjunctiva, the areolar tissue, the peritoneum, or the urethra. Inoculation of the testis of a dog was followed by the development of orchitis. The same result was produced by inoculation of the inflammatory products.

The Cholera in Europe is increasing in many and widely separated places, but chiefly in Russia. Our consul at Odessa, Russia, reports 200 cases and 62 deaths in Chotin, Bessarabia; 500 cases and 220 deaths in Podolia, etc. He warns us that the official returns are not to be trusted and also of the danger from Russian emigrants. In Lorient, France, there were in the week ending March 13, 56 cases and 6 deaths. There was one death in London last week. In Hamburg money is being spent most liberally to equip hospitals and bring to effective preparation all the means and mechanisms ready for the evidently-expected recrudesence of the disease.

Relief Hospitals at the Columbian Exposition.—It is proposed to establish a series of movable hospitals or relief stations, at various points on the World's Fair grounds, by means of which the safety and comfort of the public will be greatly subserved. Patients requiring immediate attention can be taken into one of these relief stations and there receive such prompt expert care as will often render unnecessary their removal to the hospital. The great hospitals, the makers of hospital fittings and appliances, have readily agreed to establish and maintain these relief stations at their own expense.

Exclusive Publication of Papers.—The Constitution Committee of the American Medical Association advise: "Every paper accepted is understood to be contributed exclusively to the Association Journal." We think that a rule should also be given as to what will happen when a member disobeys and publishes a duplicate of his paper in another journal. In certain instances the unformulated rule seems to be, that if the fact be known the article is not published in the Association Journal, and is not included in the subsequent volume of section work. Cases of this kind happened last year.

Legal Control of "Patent Medicines."—A bill is pending in New York to give the State Board of Health the power to analyze patent or proprietary medicines. Receipt of a fee of $50.00 makes it compulsory upon the Board to make the analysis.

Another bill has also been introduced, making it a misdemeanor to sell or offer for sale such compounds, not prescribed by a physician, without the approval of the State Board of Health.

A United American Medical Association.—Concerning the intention of the Committee on Revision of the Constitution of the American Medical Association and as to the desirability of a united profession, no better words could be spoken than those quoted from the *American Lancet*, in another column. It would seem that every American physician should most earnestly assent to the main provisions and to the spirit of the proposed revision, and work henceforth to make the Association firmly united for the great work and opportunity before it.

The Death-rate in New York for the week ending April 1, 1893, was 33.2, the total deaths being 1149. We said two weeks ago that, as compared with Chicago, some 10,000 people are unnecessarily killed in New York City each year. According to the foregoing frightful death-rate we should have said 20,000. To all criticism of the sanitary condition of Chicago she may answer that her death-rate is the one magnificent fact in answer that shuts off all further discussion.

Should Alcoholic Liquors and Tobacco be Furnished to Prisoners?—In his medical report, Dr. M. V. Ball, physician of the State Penitentiary of the Eastern District of Pennsylvania, says that alcoholic liquor has not during the past year been used in the institution. "Its advantages as a medicine are few, its disadvantages many. We believe the time will come when tobacco will be prohibited in prisons, and we would like to see it come soon. There are good reasons, from a medical standpoint alone, why its use should be discontinued. In former times tobacco was allowed only with the doctor's consent, but now it is impossible to prevent those from using it for whom it is positively harmful."

Complications of Parotiditis.—In addition to the occurrence of orchitis in the course of an attack of parotiditis, it is pointed out that occasionally acute nephritis is also present as a complication.

Dentists in England.—The total number of registered dentists in England is 4817, of which 25.43 per cent. are graduates of dental colleges—a proportion steadily increasing.

SELECTIONS.

THE NEW CONSTITUTION (PROPOSED) OF THE NEW AMERICAN MEDICAL ASSOCIATION.

THE key to these regulations is the *section work*. They are arranged so as to make this the greatest in amount, and the best in quality, possible under existing circumstances. If adopted by the Association, it will be an open declaration by that body that its watchword is hereafter to be *Scientific Medicine*.

It will be noted that there is but one class of members, which has the same individual duties and the same individual obligations. The qualifications for membership are but two: *First*, good standing in some one of the State societies or some local society recognized by the State society; *second*, the payment of the annual dues. Respecting the first, the officers of each State society are made responsible; for the second, the receipt

of the Association Treasurer is required. Hence if any physician brings to the Committee of Arrangements a certificate of good standing in his State medical society, and the Treasurer's receipt for dues to date, he will be admitted to active membership at once. If personally or by letter he does this same thing yearly, he can remain an active member so long as he lives. All disputes respecting doctors must be settled by the State societies or the local societies—by the society officials if possible, or if not, by arbitration as provided for by the Code of Ethics.

To be recognized by the American Medical Association, each State and its dependent local societies must accept the Code of Ethics of the Association as expressing the principles by which the conduct of doctors to each other and to the public should be guided.

The General Business Committee has the same powers as described by the report of the committee on its formation last year. The powers and duties of the several sections, with their executive committees, are stated with considerable fulness.

The annual addresses are eliminated, as belonging to a past stage of development, and the President's address is limited to thirty minutes. After the first day the hour of meeting of the general sessions of the Association is 4.30 P.M., all the preceding portion of the day being occupied by the section work.

It is so arranged that the real thinking for the Association shall be done in small standing committees, and the general meeting shall only hear the results of such thinking, accept or reject, or return it to the committees again for further study in certain directions. It is believed that from their representative character and relative permanence these committees will be able to consider deliberately and recommend the Association wisely, and leave all other members free to devote the entire day to section work, and the evening to social commingling.

Full and definite arrangements are made for so sifting the work done as to make it representative of the best activity of the year in all departments, and so by its quality commend it to all scientific workers throughout the world.

The only really National medical organization the United States has ever had does not, for some reason, command the adherence of the entire profession as it should. Further, the efforts made by its friends to enlarge its scope and power meet with indifference, if not positive antagonism, from those who should promote its welfare. Hence its voice is not heard above the din of the selfish intrigues of the ignorant boodle politician.

We have some hope that all true physicians may in the near future see the necessity of supporting and developing this National organization, to the end that it may speak with a united voice the wishes of the profession of the United States on occasions like the present.

If they see in this any new reason to believe that under its guidance this Association can be so developed as to be in fact the voice of the entire medical profession, they should lose no opportunity in securing the adoption of this new plan by the Association, not only by vote but by actual deeds. It is impossible to combine such vastly diversified elements, scattered over such wide extent of country, without much constant thought and persistent devotion to the idea of a National professional unity, combined with the largest individual liberty and fair dealing with each.

The time is ripe for such an organization; the elements are plastic, and, as never before, are awaiting the artist's hand, to be moulded into such a unity as shall represent the best thinking, the noblest feeling, and the most skilful work of the profession of the entire American continent.

The need is self-evident. The means for supplying it are at hand. What physician will fail to use the materials at his command for the attainment of a United Medical Profession in North America?—*The American Lancet.*

WATER-FILTRATION, ETC., AT HAMBURG.

THE improvements, which are nearing completion, consist of four large subsiding-basins and eighteen filtering-beds, on the principle of downward filtration through fine sand.

The water will be taken from a point 2.4 kilometers further up stream, so as to diminish the danger of contamination with sewerage effluvia.

The subsiding-basins are 350 meters long by 20 meters wide and 2 meters useful depth, with a capacity of 78,500 cubic meters each.

The water is allowed to settle twenty-one hours before it is drawn off into the filtering-beds.

The filters are eighteen large rectangular open basins, built of brick and cement on a clay base. The basins have been built with slanting walls on account of the marshy soil in which they are laid, and because a slanting wall excludes the possibility of leakage between the sand and the wall better than vertical ones.

Each basin has a surface of 7500 square meters, and a capacity of furnishing 11,250 cubic meters of water per day at a filtering rapidity of 62.5 millimeters per hour.

The arrangement of the filter is as follows: A layer of gravel and stone lies undermost to a thickness of 0.6 meter. A layer of sand 1 meter in thickness is spread over this. The water is kept to a depth of 1.1 meter over the surface of the sand.

The gravel and stone are laid in layers of graduated size, increasing from above downward. The sand and stone are well washed in revolving cylinders before being laid in place.

The inlet pipe to each filtering-bed is constructed with an automatic device, by which the water is kept at a constant depth of 1.1 meter above the surface of the sand.

The outlet pipe is so arranged that the rapidity of filtration is under good control, and that the filtrate from each basin may be examined separately. This important construction provides that any one, or any number of basins, may be excluded if found faulty.

From the filtering-beds the water will be conducted to large covered basins, which are designed only for storage until the water can be pumped into the city mains.

These improvements were begun in 1891, and were designed to be finished in three years, but on account of the cholera epidemic the work is being rapidly pushed forward. There are 3000 men working in relays day and night, and the authorities are exerting every effort to supply the city with filtered water before the summer sets in.—ROSENAU, *Abstract of Sanitary Reports.*

SANITARY PRECAUTIONS.

NEARLY 6000 immigrants arrived at this port on Saturday, April 1st. A comparison with the official report for February shows how great a change has recently taken place in the immigration movement. The total number of immigrants arriving at all our ports in that month was only 12,568. Now we have almost half as many at the port of New York in one day.

It appears that about 2800 of these immigrants came from German ports, and 1500 of these from Hamburg. At Naples 2500 embarked. We presume that substantially all of those arriving from the last-named port are Italians, but it does not follow that nearly all of those coming from the German ports were residents of Germany, for Hamburg has been the port of departure for Russians, Poles, and Hungarians.

Some days ago it was announced that Asiatic cholera had passed across the western boundary of Southwestern Russia from the infected province of Podolia into Gallicia. It is now reported from Vienna that the disease is spreading rapidly in Southeastern Hungary. The condition of Hamburg itself is far from satisfactory, as we have shown heretofore. Several months must pass before the projected improvements designed to purify that city's water-supply can be completed. Moreover, the assumption may safely be made that the westward movement of cholera from the western provinces of Russia is in advance of the published reports, and that we shall soon hear that the disease prevails throughout Hungary and possibly that it has reached Austria and the ports at the head of the Adriatic. The history of the epidemic at Hamburg last year shows that sanitary authorities in this country should not rely upon the assurances of local authorities in Europe as to the actual condition of the cities where they hold office.

The conclusion to which a careful consideration of the situation in Europe clearly points is that, if we must be exposed to this great flood of immigration, it is necessary that all possible sanitary precautions shall be taken without delay. With respect to Hungary, for example, it is known that the disease prevails there, and that immigrants come from that country. Immigration from Hungary ought to be stopped now, but if persons from that country are permitted to come, they and their baggage should be subjected to the most thorough inspection. Even in February, when the number of immigrants arriving was comparatively very small, we received 217 from Hungary, and in the two months of January and February the number was 1041. Undoubtedly there has been a marked increase in the last month.—*N. Y. Times.*

SOCIETY PROCEEDINGS.

THE NEW YORK NEUROLOGICAL SOCIETY.

Stated Meeting, April 4, 1893.

THE PRESIDENT, DR. M. ALLEN STARR, IN THE CHAIR.

DR. G. M. HAMMOND presented a case of posterior spinal sclerosis which he had been treating with hypodermatic injections of cerebrin. Six years ago the patient, a man aged forty years, began to suffer with double vision. This, after several months of treatment, disappeared, and for a time he was quite well. Then the typical symptoms of posterior spinal sclerosis appeared: loss of knee-jerks; sharp pains in the legs; ataxic gait; inability to stand with the eyes closed, even with the legs some distance apart; difficulty in evacuating bladder and bowels; loss of sexual power; sense of constriction of the waist. There were no ocular symptoms. The man denied syphilis. After about ten weeks of treatment with a daily hypodermatic injection of five minims of cerebrin, combined with five minims of water, the improvement was quite marked. The sexual functions and control over the bladder and bowels were perfectly restored; the sharp pains disappeared; the general health was improved; and the man was able to run up and down stairs, and stood fairly steady with his eyes closed. The knee-jerks, however, had not returned. No other treatment was employed. The improvement was gradual and steady, and began about a week after the first injection.

DR. JOSEPH COLLINS said that in a few cases of posterior spinal sclerosis in which he had employed subcutaneous injections of the cerebrin prepared by Gibier, the improvement was about equal to that in Dr. Hammond's patient. It is not uncommon, he said, to see the virile powers return in these patients; this has occurred after applying blisters to the spine.

DR. HAMMOND also presented a boy who, two years previously, while rowing a boat, found the oar slip from the left hand, from loss of power in the fingers. After about five minutes he was able to use the four fingers, but not the thumb, and from that time the paralysis progressed, first extending to the other muscles of the hand and gradually to those of the arm. Fibrillary twitchings were marked. The boy presented hemiatrophy of the tongue and paralysis of one of the ocular muscles, with double vision. The power of whistling and that of speaking certain words were lost. There was swaying on standing with eyes closed, and loss of knee-jerks on both sides; but no other ataxic symptoms, no sharp pains, no bladder or bowel symptoms, no anesthesia or paresthesia. The expression of the boy's face was rather characteristic of hereditary syphilis; the boy's father was under treatment for syphilis. There was no history of acquired syphilis. Dr. Hammond presented the case as one of progressive muscular atrophy, probably of specific origin.

DR. B. SACHS read a paper on "Syphilis of the Spinal Cord." He reviewed some recent work of Erb, who has sought to establish a "type" of spinal-cord disease which he proposes to label "syphilitic spinal paralysis." This special type is to be recognized by the following characteristics: 1. The usual symptoms of spastic paraplegia, with its peculiar gait, carriage, and movements. 2. The reflexes are much exaggerated. 3. The muscular contractures are slight, as compared with the exaggeration of the reflexes. 4. Involvement of the bladder. 5. A slight but distinct disturbance of sensation. 6. Gradual onset of the disease. 7. A decided tendency to improvement.

Dr. Sachs did not dispute the existence and the propriety of Erb's type of spinal disease, but he expressed the belief that there are other and broader points of diagnosis that should not be disregarded. To illustrate

these points, he gave the history of four cases of undoubted syphilitic disease of the spinal cord. In these cases the following were the salient features which led to the diagnosis: In three of them there was spastic paraplegia of the most pronounced type. In these the reflexes were greatly exaggerated. In two the muscular contractures were slight; in one they were extreme. In one there was permanent involvement of the bladder. In all but one sensation was disturbed. In two the onset was gradual. All had shown a decided tendency to improvement. In one instance there was a distinct atrophic paralysis, with all the symptoms that pointed to a widespread affection of the gray matter of the cord. In one case, in which the diagnosis of syphilitic disease was most evident, the contractures were extreme; the bladder remained persistently involved; and bedsores formed.

Dr. Sachs said that the following points have impressed themselves on his mind as the more characteristic of spinal-cord syphilis: 1. The unusual distribution of the disease over the greater portion of the cord, involving, in some cases, the cervical, lower dorsal, and lumbar enlargements. 2. The relatively slight intensity of the morbid process, as compared with the extensive area involved, as evidenced by the preservation of some of the functions of the cord, with complete loss of others. 3. A rapid subsidence of some symptoms and a very chronic persistence of others. 4. The frequent history of other symptoms pointing to syphilitic infection in the same or in other parts of the central nervous system.

In syphilitic spinal-cord disease there is not, as in cases of acute myelitis, a morbid process that is rapidly destructive and that quickly advances through the entire cross-section of the cord, with symptoms due to loss of function of the various spinal systems. If the syphilitic disease be the result of a specific endarteritis of the vessels of the cord, we know that some, and by no means all, of those vessels are affected; and that the disease advances slowly from one group to another. If there be diffuse specific infiltration, one part after the other is slowly invaded. The process has a remarkable tendency, too, to advance for a time and then to recede, whether as a result of treatment or not, and then possibly to increase with renewed force. If the infiltration start from the meninges, it most frequently invades the lateral columns first, often at symmetrical points, and advances very slowly from white to gray matter. The intensity of the process is spent upon the lateral columns; hence the frequency of the spastic symptoms. It may invade the gray matter, giving rise to sensory symptoms, sometimes to atrophic symptoms.

DR. C. L. DANA said that, in one case of spinal-cord syphilis coming under his observation, the patient died of an intercurrent disease, and an autopsy was obtained. The type of symptoms in that case resembled so closely what Gowers has described as ataxic paraplegia that that was the clinical term applied to it. The autopsy showed a transverse myelitis, of specific origin, in the dorsal region, and the appearance of the lesion was much like that described by Dr. Sachs—starting from the meninges and gradually invading the substance of the cord. Dr. Dana added that he has almost come to the conclusion that tranverse myelitis, not manifestly due to hemorrhage, tumor, injury, etc., and not of sudden development, but of gradual and irregular onset, is presumptive evidence of a specific origin.

DR. L. C. GRAY said that he had long regarded with suspicion any case of paralysis of the upper or lower extremities, with marked contractures, with or without exaggeration of the tendon-reflexes. This is particularly true in cases in which the symptoms are unequal or asymmetrical. The poison of syphilis, however, is so diffused that it is unsafe to assume that its effect is spent entirely upon any particular set of fibers in the spinal cord, and it is difficult to lay down a certain class of symptoms which should be present in these cases.

DR. ROBERT S. NEWTON detailed the history of a patient who developed symptoms of a transverse myelitis while under active treatment for syphilis, the treatment at the time having been persisted in for over a year.

DR. L. C. GRAY opened the discussion on "The Present Status of Craniectomy." He stated that about three years ago Lannelongue proposed the operation of craniectomy for the relief of mental defects in children. The causes of such mental defects are, in the main, porencephalitis, meningitis and meningo-encephalitis, hemorrhage, either diffuse or localized; trauma, hydrocephalus, myxedema, possible premature ossification of the skull, mainly in the region of the sutures and fontanels. The last cause has been brought into prominence lately by Lannelongue's operation, although the idea was advanced in 1851 by Virchow, in a memoir upon cretinism. It is impossible to obtain, in this country at least, a sufficient number of skulls of idiots whose histories have been carefully recorded, to determine the question. Tacquet has examined twenty-nine skulls of idiots, and has expressed the belief that premature obliteration of the sutures of the cranium is not more common in idiots than in healthy individuals.

Dr. Gray said that he is entirely at a loss to understand how an examination of the skulls of idiots could throw any light upon the question as to whether or not primary ossification of the sutures and fontanels arrested the development of the cerebrum. He expressed the opinion that only those cases of idiocy dependent upon premature ossification of the sutures and fontanels, recent traumatic injuries, and hemorrhages, can possibly be benefited by craniectomy; for porencephalitis, meningitis, meningo-encephalitis, and myxedema are lesions that cannot in any way be affected by the surgeon's knife. A correct diagnosis is of the utmost importance. If, in any case of idiocy, a reliable history can be obtained from someone who has been with the child from birth, preferably its own mother, and trauma, meningitis, hemorrhage, and myxedema can be positively excluded, there will then be only so-called tuberous hypertrophy, porencephalus, and premature ossification of the sutures and fontanels to be dealt with. Tuberous hypertrophy is so rare as to be practically out of consideration. Porencephalus generally occurs in fetal or early infantile life, and will, in a vast majority of cases, cause some paralysis of motion or sensation. Porencephalus, meningitis, hemorrhage, trauma, and tuberous hypertropy are likely to cause some organic destruction of the cerebrum or cerebellum, and this must manifest itself by mutism, blindness, motor paralysis, localized convulsions, or contracture of a single limb, or of both

an upper and a lower limb on the same side. If in an idiot child these symptoms be wanting, it seems quite reasonable to make a diagnosis of premature ossification of the sutures and fontanels as causative of the mental condition. Dr. Gray said that he was quite willing to believe that the pressure of a non-expanding skull upon a cerebrum expansile with developing tendencies is sufficient to cause such symptoms of cerebral irritation as strabismus, generalized convulsions, inability to walk, contractures, violent temper, involuntary micturition and defecation, and various general muscular movements that cannot be classified. This is precisely the point that has not yet been tested by the operations that have been performed. In concluding, Dr. Gray narrated five cases of craniectomy that have come under his observation.

DR. C. L. DANA presented a boy, six years old, upon whom craniectomy had been performed about a year previously. The child was an illegitimate one, and nothing is known of his history up to the first year of his age. He was rachitic; the fontanels were large and closed during the third year. During the first three years of life three or four general convulsions occurred daily. Up to the time of the operation the boy was unable to swallow, except when in the semi-recumbent position, and he could only take liquid food. He could not say a word or express a thought. On measurement, the head was found to be below the normal size. A few weeks after the operation the child began to talk and could masticate and swallow solid food. There was decided and striking increase in the child's intelligence a few weeks after the operation. The great circumference of the head increased one-half of a centimeter; the naso-occipital circumference increased nearly two centimeters. The head has thus grown a little faster than is usual in children of a corresponding age.

Dr. Dana also narrated three other cases of craniectomy coming under his observation. All died from shock soon after the operation. In conclusion, he stated that he does not see how any conclusions can be drawn, one way or the other, as regards the determination of what class of cases should be operated on. Cases of infantile hemiplegia, with epilepsy and idiocy, can hardly ever be benefited by the operation.

DR. B. SACHS gave the histories of three cases of craniectomy coming under his observation. In the first two, death rapidly resulted from shock. In the third case a longitudinal section of bone was removed from one side of the skull, and the child recovered. Some months afterward a second operation was undertaken for the purpose of removing a like section of bone on the opposite side of the head. This operation proved fatal. Dr. Sachs presented the skull of this patient. It showed that the longitudinal opening made at the first operation had become firmly closed by the dura (which had not been opened) and by a dense fibrous mass. This had occurred during the two months intervening between the first operation and the time of the child's death. This specimen showed that the removal of a long strip of bone is not effective and does not relieve the general pressure. The results would, no doubt, be better if a large segment of bone were removed in the frontal region, thus giving that portion of the brain which needs it most a chance to develop. In a considerable number of cases of idiocy it is the frontal portion of the brain that is deficient. The proper cases for operation are those that present the symptoms of idiocy without any of those of organic disease of the brain, excepting retarded development.

DR. G. M. HAMMOND said that five cases of idiocy for which craniectomy was performed have come under his observation. His own experience, as well as the experience of others, with Lannelongue's operation has led him to the conclusion that it only stops idiocy by stopping the life of the child. Of the five patients he has operated on, two died from shock. In the other three cases—each operated on by a different surgeon—there was slight improvement in the intelligence of the children. Not a single case has thus far been reported in which the idiocy was cured. The patients are merely transferred from one degree of idiocy to another. In his opinion, the proper cases to select for operation are those in which the patients are only slightly idiotic—not the hopeless cases—and it is well to operate early, before degenerative changes have occurred. The operation should not be undertaken after the sixth or seventh year.

DR. STARR, in reply to a question, said that craniectomy has apparently been undertaken without regard to age. Keen operated on a patient aged nineteen years; Hammond, Sr., operated on one aged twenty-two years, and Weir operated on one aged eighteen.

DR. E. C. SEQUIN said that for a long time he has held the opinion that the early closure of the fontanels and the premature ossification of the cranium were secondary to the arrest of development of the brain, and he has always advised against operative interference in these cases. Now he stands ready to be convinced as to the value of craniectomy for the relief of such patients. The cases thus far reported, he thought, were not very hopeful. The improvement noted in a few cases has been slight, while the surgical results are far from encouraging.

THE PRESIDENT said that he thought that the members took too pessimistic a view of the operation. He has had six patients operated on, without a single death. The total number of cases reported by the various speakers was 23; of these, 7 proved fatal. Aside from these, he has collected 37 cases, with 14 deaths—a mortality of about 33 per cent. This rate of mortality is not so very high if it be borne in mind that the operation is undertaken to relieve an apparently hopeless condition.

Of the six cases that have come under his observation, three have materially improved in intelligence; the other three were operated on too recently to warrant any definite report at present. Lannelongue's operation was found to be inefficient, as the area of bone removed soon becomes filled up with dense fibrous tissue; so that Wagner's operation was adopted. With the grooved chisel, a curved, omega-shaped incision is made through the skull on one side. This flap of bone is then firmly grasped and raised upward, until it becomes fractured, thus giving plenty of room to the brain underneath. The flap of bone is permanently fixed in its raised position. In one case, both sides of the skull were treated in this way. The chisel, when properly used, causes very little shock. By means of it the work is performed much more speedily than with the trephine. The chisel must be very sharp, such a one as is used for cutting ivory.

In conclusion, Dr. Starr said that his experience in these cerebral cases has led him to believe that we know as yet very little about the various pathologic conditions of the brain.

The following officers were reëlected for the ensuing year: Dr. M. Allen Starr, President; Dr. B. Sachs, Vice-President; Dr. E. D. Fisher, Secretary.

NEWS ITEMS.

Medical Matters at New Orleans.—Dr. Albert B. Miles has been elected to succeed the late Dr. Samuel Logan as Professor of Surgery in Tulane University. He is House Surgeon to the Charity Hospital, and was the Professor of Materia Medica and Therapeutics; he has temporarily filled the chair of Surgery since Dr. Logan's death. Dr. L. F. Reynaud, who was formerly Lecturer on Clinical Medicine, will be Professor of Materia Medica, Therapeutics, and Clinical Medicine.

At the recent graduation exercises of Tulane University there were ninety-two graduates. The valedictory was delivered by Dr. W. H. Woods, of Mississippi.

The Training School for Nurses in the Charity Hospital will open in May. No men will be admitted as students in the Training School this year.

Tulane University will in the future require a preliminary examination, and a three years' graded course.

The Louisiana State Medical Society will meet in New Orleans on May 9th, and remain in session for three days. The members have shown more interest this year than usual, and some excellent papers will be read.

Eleventh International Medical Congress, Rome, Italy, September 24 to October 1, 1893.—It is announced that the North German Lloyd Steamship Company offers a reduction of 25 per cent. to physicians going to and coming from the Eleventh International Medical Congress on the steamer Werra, which is to sail from New York on August 5th and September 9th, and on the steamer Fulda, on August 19th. Both steamers sail to Genoa. The same reduction will be made for the return trips in October and November, on the same steamers, and for the Company's Saturday (from Bremen, Sunday from Southampton) steamers.

The Hamburg-American Packet Company offers a reduction of 25 per cent., both going and coming, for all its steamers during the year 1893.

The Compagnie Générale Transatlantique offers the rates which are allowed French officers, that is, $63.50 for an $80 accommodation and $91.50 for a $120 accommodation.

Examinations for the Marine Hospital Service.—A board of officers will be convened at Washington, D. C., June 26, 1893, for the purpose of examining applicants for admission to the grade of assistant surgeon in the United States Marine-Hospital Service.

Candidates must be between twenty-one and thirty years of age, graduates of a respectable medical college, and must furnish testimonials from at least two responsible persons as to character.

For further information or for invitation to appear for examination, inquiries should be addressed to Dr. Walter Wyman, Supervising Surgeon-General U. S. Marine-Hospital Service, Washington, D. C.

Dr. George C. Shattuck died at Boston on March 22, 1893, in the eightieth year of age. He was, with Bowditch, Gerhard, Stillé, and Metcalf, a pupil of Louis's. For thirty-six years, until 1885, he was one of the visiting physicians to the Massachusetts General Hospital. He had also been Professor of Clinical Medicine and Professor of the Theory and Practice of Medicine and Dean in the Harvard Medical School.

Albert Friederick Stifel, Ph.G., M.D., died at his home in Wheeling, West Virginia, April 10th, in the thirty-eighth year of his age. Death was due to glioma of the frontal lobe of the brain, the optic chiasm and nerves having become destroyed by the neoplasm. He made a correct diagnosis of the cause and location of the lesion prior to his death.

The Medical Association of Georgia held its forty-fourth annual session at Americus, Georgia, April 19, 20, and 21, 1893. A lengthy and interesting program was presented. Dr. A. A. Smith, of Hawkinsville, presided. Dr. Dan. H. Howell, of Atlanta, is the secretary.

The Medical Society of the State of North Carolina will hold its fortieth annual meeting in the city of Raleigh, May 9, 10, and 11, 1893. Dr. J. W. McNeill, of Fayetteville, will preside. Dr. Robert D. Jewett, of Wilmington, is the secretary.

The Texas State Medical Association will hold its twenty-fifth annual session at Galveston, May 2, 3, 4, and 5, 1893. Dr. J. D. Osborn, of Cleburne, will preside. Dr. H. A. West is the secretary.

BOOKS AND PAMPHLETS RECEIVED.

Salicylates in the Treatment of Pleurisy with Effusion. By George Dock, M.D. Reprinted from the Therapeutic Gazette, 1893.

Notes on the Appendix Vermiformis: Anatomical and Clinical. By George Dock, M.D. Reprinted from the Transactions of the Michigan State Medical Society, 1892.

A Clinico-Pathological Study of Injuries of the Head, with Special Reference to Lesions of the Brain Substance. By Charles Phelps, M.D. Reprinted from the New York Medical Journal, 1893.

A Case of Eczema with Urticaria as a Complication. By J. Abbott Cantrell, M.D. Reprinted from the Philadelphia Polyclinic, 1893.

Psoriasis and Syphilis. By J. Abbott Cantrell, M.D. Reprinted from the Philadelphia Polyclinic, 1893.

The First International Congress of Gynecology and Obstetrics. By George M. Edebohls, M.D. Reprinted from the New York Journal of Gynecology and Obstetrics, 1893.

The Prevention of Hernia after Incision of the Abdominal Walls. By George M. Edebohls, M.D. Reprinted from the New York Journal of Gynecology and Obstetrics, 1893.

Handbook of the Diagnosis and Treatment of Diseases of the Throat, Nose, and Naso-Pharynx. By Carl Seiler, M.D. Fourth edition. Philadelphia: Lea Brothers & Co., 1893.

The Clinical Examination of Breast Milk. By L. Emmett Holt, M.D. Reprinted from the Archives of Pediatrics, 1893.

Report of the Quarantine Commission. Harrisburg: Edwin K. Myers, State Printer, 1893.